HIDDEN LAKE DAM REMOVAL

Bid Number: **xx**

Date: July 2019

17500 Midvale Avenue North
Shoreline, WA 98133
(206) 801-2700

SHORELINE CITY COUNCIL

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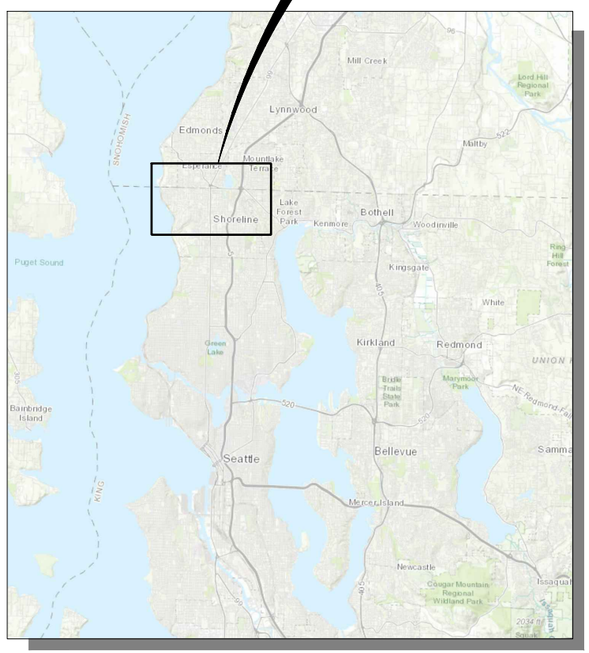
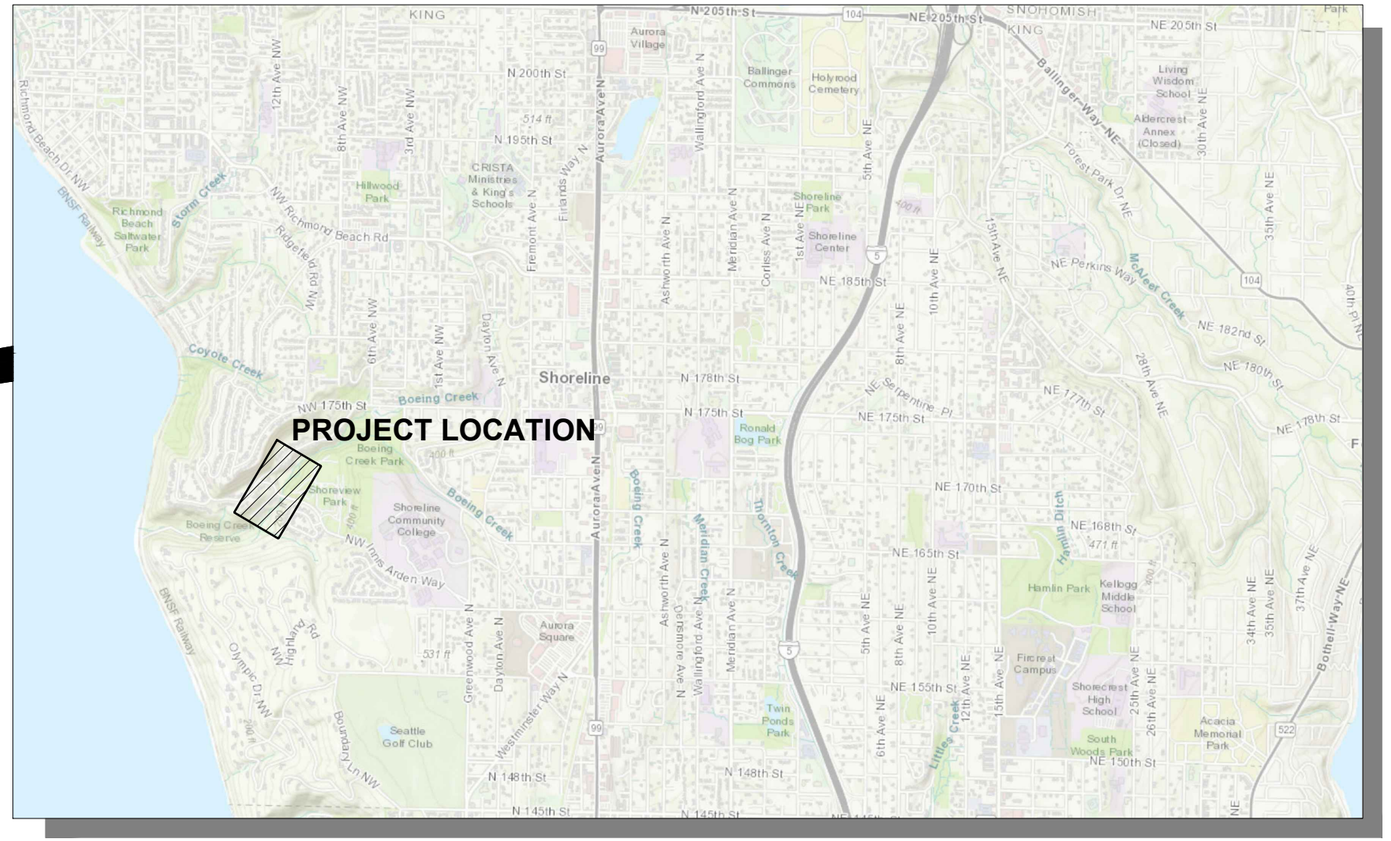
PROJECT MANAGER
JOHN FEATHERSTONE, PE



LOCATION MAP NTS



VICINITY MAP NTS

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DATUM

APPROVED FOR CONSTRUCTION

TRICIA JUHNKE, P.E., CITY ENGINEER — DATE

60 PCT DESIGN - NOT FOR CONSTRUCTION

FUNDED IN PART BY A FLOOD REDUCTION GRANT FROM THE KING COUNTY FLOOD CONTROL DISTRICT

HERRERA

	Initials	Date	Description
Drawn	EM		
Designed	IBM, VW		
Checked	ME		
Revisions			
Revisions			

IAN B. MOSTRENKO — STATE OF WASHINGTON — 36069 — REGISTERED PROFESSIONAL ENGINEER — DRAFT

HIDDEN LAKE DAM REMOVAL
60 PCT DESIGN - NOT FOR CONSTRUCTION
COVER SHEET AND SHEET INDEX

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Project No. 18-06771-000

Sheet G-1.0

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ABBREVIATIONS

APPROX	APPPROXIMATE
CMP	CORRUGATED METAL PIPE
CP	CONTROL POINT
CPP	CORRUGATED PLASTIC PIPE
DWG	DRAWING
E	EAST, EASTING
EL	ELEVATION
EX	EXISTING
FT	FEET/FOOT
HOR, H	HORIZONTAL
HVF	HIGH VISIBILITY FENCE
HVSF	HIGH VISIBILITY SILT FENCE
IE	INVERT ELEVATION
IN	INCH/INCHES
MAX	MAXIMUM
MIN	MINIMUM
N	NORTH/NORTHING
NO	NUMBER
NTS	NOT TO SCALE
NW	NORTHWEST
OC	ON CENTER
OHW	ORDINARY HIGH WATER
QTY	QUANTITY
ROW	RIGHT-OF-WAY
SD	STORM DRAIN
STA	STATION
STD	STANDARD
TCE	TEMPORARY CONSTRUCTION EASEMENT
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
TYP	TYPICAL
V	VERTICAL
WAC	WASHINGTON ADMINISTRATIVE CODE
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

LEGEND - EXISTING FEATURES

- PARCEL LINE
- EASEMENT
- SURVEY EXTENTS
- RIGHT-OF-WAY (ROW)
- POND
- ORDINARY HIGH WATER (OHW)
- DITCH
- WETLAND
- FENCE (X)
- EDGE OF PAVEMENT
- GUARDRAIL
- SANITARY SEWER (SS)
- GAS LINE (G)
- WATER LINE (W)
- TELEPHONE LINE (T)
- SANITARY SEWER MANHOLE
- WATER VALVE
- CONIFEROUS TREE
- DECIDUOUS TREE
- TRAIL

LEGEND - PROPOSED FEATURES

- PROJECT LIMITS
- TEMPORARY CONSTRUCTION EASEMENT
- CLEAR AND GRUB LIMITS (CG)
- DESIGN CONTOURS (100)
- SILT FENCE (SF)
- HI-VISIBILITY FENCE (HVF)
- HIGH VISIBILITY SILT FENCE (HVSF)
- ACCESS ROAD
- REMOVE ITEM
- ABANDON ITEM
- SANDBAG DIVERSION DAM
- STREAM FLOW BYPASS
- BYPASS PIPE
- CONSTRUCTION STAGING AREA
- STABILIZED CONSTRUCTION ENTRANCE
- DAM FILL MATERIAL
- GABION BASKETS AND MATTRESS
- WETLAND CREATION AREA
- TRAIL
- BYPASS PUMP (P)
- FOOT BRIDGE
- TREE PROTECTION
- CONTROL POINT
- REMOVE CONIFEROUS TREE
- REMOVE DECIDUOUS TREE
- RAPTOR PERCH
- HABITAT TYPE 1 STRUCTURE
- HABITAT TYPE 2 STRUCTURE
- HABITAT TYPE 3 STRUCTURE
- REVETMENT STRUCTURE

1 / C-1 — DETAIL REFERENCE NUMBER; DRAWING ON WHICH DETAIL IS SHOWN

DETAIL (1 / C-1) — DETAIL REFERENCE NUMBER; DRAWING FROM WHICH DETAIL WAS TAKEN
SCALE: NTS

A / C-4 — SECTION REFERENCE LETTER; DRAWING ON WHICH SECTION IS SHOWN

SECTION/PROFILE (A / C-2) — SECTION/PROFILE REFERENCE LETTER; DRAWING FROM WHICH SECTION/PROFILE WAS TAKEN
SCALE: NTS

"-" INDICATES THAT THE DETAIL/SECTION IS SHOWN ON THE SAME SHEET

"TYP" INDICATES THAT THE DETAIL/SECTION IS UNIFORMLY TYPICAL THROUGHOUT PROJECT EXCEPT WHERE OTHERWISE NOTED

"VAR" SPECIFIES THAT DETAIL/SECTION WAS TAKEN FROM VARIOUS DRAWINGS

NOTE AND DETAIL/SECTION REFERENCING

CITY OF SHORELINE STANDARD PLAN NOTES

GENERAL NOTES:

1. THE CONTRACTOR SHALL ADHERE TO ALL APPLICABLE NOTES UNLESS OTHERWISE DIRECTED BY THESE PLANS, THE ENGINEER OR A CITY OF SHORELINE REPRESENTATIVE.

2. THE CONTRACTOR SHALL VERIFY ALL EXISTING DATA SHOWN IN THESE DOCUMENTS AND NOTIFY ENGINEER IMMEDIATELY OF ANY CONFLICTS WITH PROPOSED FEATURES PRIOR TO CONSTRUCTION. SEE DWG G-2.0 FOR SURVEY CONTROL.

3. ALL COMPACTION METHODS, MATERIALS AND PERFORMANCE CRITERIA SHALL BE IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.

4. ALL PIPE LENGTHS, INVERT ELEVATIONS AND DRAINAGE STRUCTURE LOCATIONS ARE MEASURED AT THE CENTER OF THE DRAINAGE STRUCTURE UNLESS NOTED OTHERWISE.

5. ALL LOCATIONS OF EXISTING UTILITIES SHOWN HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN AND AVOID OTHER UTILITIES NOT SHOWN ON THE PLANS. EXISTING UTILITIES SHALL BE PROTECTED, SUPPORTED, OR MAINTAINED DURING CONSTRUCTION.

6. CONTACT THE UNDERGROUND UTILITIES LOCATION SERVICE (811) AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

7. ALL WORK SHALL CONFORM TO THESE APPROVED PLANS AND SPECIFICATIONS, THE SHORELINE MUNICIPAL CODE, THE ENGINEERING DEVELOPMENT MANUAL, AND FEDERAL AND STATE REQUIREMENTS.

SITE NOTES (SN)

SN.1. THE CONTRACTOR SHALL HAVE ANY REQUIRED PERMIT(S) AND CONDITIONS AND THE APPROVED PLANS AVAILABLE AT THE JOB SITE.

SN.2. ALL INSTALLATION METHODS AND MATERIALS SHALL MEET THE WSDOT/APWA STANDARD SPECIFICATIONS.

SN.3. ANY CHANGES FROM THE APPROVED PLANS REQUIRE PRE-APPROVAL FROM THE ENGINEER.

SN.4. THE CONTRACTOR ASSUMES SOLE RESPONSIBILITY FOR WORKER SAFETY AND DAMAGE FROM CONSTRUCTION OPERATIONS TO STRUCTURES AND OTHER IMPROVEMENTS.

SN.5. SURVEYING FOR PUBLIC FACILITIES SHALL BE PERFORMED UNDER THE DIRECTION OF A WASHINGTON LICENSED LAND SURVEYOR. VERTICAL DATUM SHALL BE NAVD 1988. HORIZONTAL DATUM SHALL BE WASHINGTON STATE (GRID) COORDINATES, NORTH ZONE, USING NAD 83/91 SURVEY CONTROL AND TO ANY TWO CITY OF SHORELINE HORIZONTAL CONTROL MONUMENTS. FOR PROJECTS WITHIN A FLOOD CONTROL ZONE, THE SURVEYOR SHALL PROVIDE CONVERSION CALCULATIONS TO NGVD 1929.

SN.6. REPLACE OR RELOCATE ALL SIGNS, STRIPING, POLES AND OTHER ITEMS IN THE RIGHT-OF-WAY THAT ARE DAMAGED OR REMOVED DURING CONSTRUCTION.

SN.7. RETAIN, REPLACE OR RESTORE ALL VEGETATION IN RIGHTS-OF-WAY, EASEMENTS, AND ACCESS TRACTS DISTURBED DURING CONSTRUCTION.

SN.8. INTERRUPTION OF NORMAL TRAFFIC FLOW SHALL REQUIRE TRAFFIC CONTROL. REFER TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND WSDOT STANDARD SPECIFICATIONS. TRAFFIC CONTROL IS REQUIRED FOR ALL TRANSVERSE CUTS IN ROADWAY. FOR INFORMATION CONTACT THE CITY OF SHORELINE RIGHT-OF-WAY INSPECTOR.

SN.9. THE CONTRACTOR SHALL RESTORE TO CURRENT STANDARDS CRITICAL AREAS, AND PUBLIC AND PRIVATE PROPERTY DAMAGED BY CONTRACTOR'S OPERATIONS.

SN.10. AT ALL TIMES MAINTAIN ACCESS TO BUILDINGS FOR FIRE, PEDESTRIAN AND VEHICULAR ACCESS.

SN.11. BEFORE BEGINNING ANY CONSTRUCTION ACTIVITIES, ESTABLISH CLEARING LIMITS, INSTALL CONSTRUCTION ENTRANCE, AND INSTALL BEST MANAGEMENT PRACTICES.

SN.12. ALL UTILITY TRENCHES AND ROADWAY SUBGRADES WITHIN CITY RIGHT-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH KING COUNTY ROAD STANDARDS. 100% CRUSHED ROCK OR CONTROLLED DENSITY FILL (CDF)

	Initials	Date	Description
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Designed	IBM, VW		
Checked	ME		
Revisions			
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CITY OF SHORELINE
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Shoreline, WA 98133
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EROSION AND SEDIMENTATION CONTROL REQUIREMENTS (TESC)

TESC.1. THE IMPLEMENTATION AND MAINTENANCE OF EROSION CONTROL FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR ON A DAILY BASIS AND UNTIL ALL CONSTRUCTION IS APPROVED.

TESC.2. AT ALL TIMES PROTECT CRITICAL AREAS AND THEIR BUFFERS, ADJACENT PRIVATE PROPERTIES AND PUBLIC PROPERTY AND SURVEY MONUMENTS.

TESC.3. EROSION AND SEDIMENTATION CONTROL (ESC) FACILITIES MUST BE CONSTRUCTED PRIOR TO AND IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT-LADEN WATER OR AIRBORNE SEDIMENT DOES NOT ENTER THE STREAM OR VIOLATE APPLICABLE WATER OR AIR QUALITY STANDARDS DURING THE CONSTRUCTION PERIOD. THESE ESC FACILITIES SHALL BE UPGRADED TO INCLUDE ADDITIONAL SUMPS, DITCHES, FENCES, ETC. AS NEEDED FOR UNEXPECTED STORM EVENTS.

TESC.4 STABILIZED CONSTRUCTION ENTRANCE AND WASH PAD SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED BY THE CITY OF SHORELINE TO ENSURE THAT PAVED AREAS ARE KEPT CLEAN FOR THE PROJECT DURATION.

TESC.5. ANY AREA STRIPPED OF VEGETATION (INCLUDING ROADWAY EMBANKMENTS), WHERE NO FURTHER WORK IS ANTICIPATED FOR A PERIOD OF 2 DAYS, SHALL BE IMMEDIATELY STABILIZED WITH APPROVED ESC METHODS AS FOLLOWS.

A. FROM MAY 1 THROUGH SEPTEMBER 30, INSTALL TESC COVER MEASURES TO PROTECT DISTURBED AREAS THAT WILL REMAIN UNWORKED FOR SEVEN DAYS OR MORE.

B. FROM OCTOBER 1 THROUGH APRIL 30:
   - B.A. INSTALL TESC COVER MEASURES TO PROTECT DISTURBED AREAS THAT WILL REMAIN UNWORKED FOR TWO DAYS OR MORE.
   - B.B. PROTECT STOCKPILES AND STEEP CUT/FILL SLOPES IF UNWORKED FOR MORE THAN 12 HOURS.
   - B.C. STOCKPILE ON SITE ENOUGH COVER MATERIALS TO COVER ALL DISTURBED AREAS.

C. ANY AREA NEEDING ESC MEASURES, NOT REQUIRING IMMEDIATE ATTENTION, SHALL BE ADDRESSED WITHIN 15 DAYS.

TESC.6. ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 48 HOURS FOLLOWING A STORM EVENT.

TESC.7. AT NO TIME SHALL MORE THEN ONE (1) FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS & CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO A DOWNSTREAM SYSTEM.

TESC.8. FILTER FABRIC FENCING SHALL BE PURCHASED IN A CONTINUOUS ROLL AND CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST WITH A MINIMUM 24 INCHES OVERLAP AND BOTH ENDS SECURELY FASTENED TO THE POST.

TESC.9. THE FILTER FABRIC FENCE SHALL BE INSTALLED TO FOLLOW THE CONTOURS WHERE FEASIBLE. THE FENCE POSTS SHALL BE SPACED A MAXIMUM OF SIX FEET APART AND DRIVEN SECURELY INTO THE GROUND A MINIMUM DEPTH OF 30 INCHES. A TRENCH SHALL BE EXCAVATED UPGRADIENT AND ADJACENT TO THE WOOD POST TO ALLOW THE FILTER FABRIC TO BE BURIED.

TESC.10. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPGRADIENT SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES, TIE WIRES, OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF FOUR INCHES. THE STANDARD STRENGTH FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.

TESC.11. WHEN EXTRA-STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF STANDARD NOTES APPLY. FILTER FABRIC FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPGRADIENT SLOPE AREA HAS BEEN PERMANENTLY STABILIZED. FILTER FABRIC FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

TESC.12. THE EROSION PREVENTION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES SHOWN ON THESE PLANS ARE MINIMUM REQUIREMENTS. FIELD ADJUSTMENTS SHALL BE MADE TO ENSURE THE TESC PERFORMS IN ACCORDANCE WITH THE 2019 DEPARTMENT OF ECOLOGY STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON, VOLUME II.

TESC.13. BEFORE ANY GROUND DISTURBANCE OCCURS ALL DOWNSTREAM/DOWNSLOPE BEST MANAGEMENT PRACTICES MUST BE CONSTRUCTED AND OPERATIONAL.

TESC.14. BEST MANAGEMENT PRACTICES SHALL REMAIN IN PLACE UNTIL FINAL SITE CONSTRUCTION IS COMPLETED AND PERMANENT STABILIZATION IS ESTABLISHED AND APPROVED BY THE CITY.

TESC.15. INSPECT AND MAINTAIN BEST MANAGEMENT PRACTICES DAILY IN ACCORDANCE WITH THE MOST RECENT VERSION OF DEPARTMENT OF ECOLOGY STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON.

TESC.16. FAILURE TO MAINTAIN TESC MEASURES IN ACCORDANCE WITH ADOPTED STANDARDS MAY RESULT IN THE WORK BEING PERFORMED AT THE CITY'S DIRECTION AND THE COSTS DEDUCTED FROM MONIES OWED TO CONTRACTOR.

TESC.17. DURING THE LIFE OF THE PROJECT, THE CONTRACTOR SHALL MAINTAIN IN GOOD CONDITION AND PROMPTLY REPAIR, RESTORE OR REPLACE ALL GRADE SURFACES; WALLS, DRAINS, STRUCTURES, VEGETATION, TESC MEASURES, AND OTHER PROTECTIVE DEVICES IN ACCORDANCE WITH APPROVED PLANS.

TESC.18. THE CONTRACTOR SHALL MONITOR DOWNSTREAM DRAINAGE FEATURES, AND, WITH THE CITY'S APPROVAL, SHALL REMOVE ALL SEDIMENT DEPOSITION RESULTING FROM THE PROJECT-RELATED WORK.

TESC.19. ALL WORK SHALL BE PERFORMED PER APPROVED PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL MAINTAIN A SET OF APPROVED PLANS AND SPECIFICATIONS AND ASSOCIATED PERMITS ONSITE.

TESC.20. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL LAWS.

TESC.21. BEFORE REMOVING ANY TEMPORARY MEASURES, INSTALL AND ESTABLISH THE UPSTREAM PERMANENT MEASURES.

TRAFFIC CONTROL CONDITIONS (TC)

TC.1. INTERIM TRAFFIC CONTROL: THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE FOR INTERIM TRAFFIC CONTROL DURING CONSTRUCTION ON OR ALONG TRAVELED CITY ROADS.

TC.2. WHEN ROAD OR DRAINAGE WORK IS TO BE PERFORMED ON CITY ROADS THAT ARE OPEN TO TRAFFIC, THE CONTRACTOR WILL BE REQUIRED TO SUBMIT A WRITTEN TRAFFIC CONTROL PLAN FOR APPROVAL BY THE REVIEWING AGENCY 10 DAYS PRIOR TO BEGINNING THE WORK. TRAFFIC CONTROL SHALL FOLLOW THE GUIDELINES OF SECTION 1-07.23 OF THE WSDOT/APWA STANDARD SPECIFICATIONS.

TC.3. ALL BARRICADES, SIGNS AND FLAGGING SHALL CONFORM TO THE REQUIREMENTS OF THE MUTCD. SIGNS MUST BE LEGIBLE AND VISIBLE AND SHALL BE REMOVED AT THE END OF EACH WORK DAY IF NOT APPLICABLE AFTER CONSTRUCTION HOURS.

TC.4. TEMPORARY ROAD CLOSURES AND DETOURS: WHEN TEMPORARY ROAD CLOSURES CANNOT BE AVOIDED THE CONTRACTOR SHALL POST "TO BE CLOSED" SIGNS A MINIMUM OF FIVE DAYS PRIOR TO THE CLOSING. THE TYPES AND LOCATIONS OF THE SIGNS SHALL BE SHOWN ON A DETOUR PLAN.

TC.5. A DETOUR PLAN MUST BE PREPARED AND SUBMITTED TO THE CITY OF SHORELINE PUBLIC WORKS TRAFFIC SERVICES AT LEAST 10 WORKING DAYS IN ADVANCE, AND APPROVED PRIOR TO CLOSING ANY CITY ROAD. IN ADDITION, THE CONTRACTOR MUST NOTIFY, IN WRITING, LOCAL FIRE, SCHOOL, LAW ENFORCEMENT AUTHORITIES, METRO TRANSIT, AND ANY OTHER AFFECTED PERSONS AS DIRECTED BY THE ENGINEER AT LEAST FIVE DAYS PRIOR TO CLOSING.

TC.6. HAUL ROUTES: APPROVED HAUL ROUTES ARE NOTED ON THE PLANS. DEVIATIONS FROM THE DESIGNATED HAUL ROUTE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

TC.7. WHEN REQUIRED, THE HAUL ROUTE PLAN MUST BE PREPARED AND SUBMITTED TO THE REVIEWING AGENCY AND APPROVED PRIOR TO BEGINNING CONSTRUCTION. THE HAUL ROUTE PLAN SHALL ADDRESS ROUTING, HOURS OF OPERATION, SIGNAGE AND FLAGGING, AND DAILY MAINTENANCE.

TC.8. IF THE CONTRACTOR'S TRAFFIC FAILS TO USE THE DESIGNATED HAUL ROUTE, THE REVIEWING AGENCY MAY PROHIBIT OR LIMIT FURTHER WORK ON THE DEVELOPMENT UNTIL SUCH TIME AS THE REQUIREMENTS OF THE HAUL ROUTE ARE COMPLIED WITH.

TC.9. TRAFFIC CONTROL SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION. INTERRUPTION OF NORMAL TRAFFIC FLOW SHALL REQUIRE TRAFFIC CONTROL (SEE TC.11, FOR DETAILS).

TC.10. CONTRACTOR SHALL PROTECT EXISTING TRAFFIC CONTROL SIGNS WITHIN THE LIMITS OF WORK

TC.11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY REQUIRES A RIGHT-OF-WAY USE PERMIT, TO BE REVIEWED PRIOR TO CONSTRUCTION AND INSPECTED DURING CONSTRUCTION.

TREE PROTECTION CONDITIONS (TP)

BEFORE SITE WORK BEGINS

TP.1. BEFORE ANY CLEARING OR GRADING OCCURS INSTALL PROTECTION FOR TREES AND CRITICAL AREAS/BUFFERS.

TP.2. INSTALL TEMPORARY CONSTRUCTION FENCES AROUND THE DRIP LINES OF SINGLE TREES TO BE PRESERVED.

TP.3. INSTALL FENCING AROUND THE EDGE FORMED BY THE DRIP LINES OF A CLUSTER OF TREES TO BE RETAINED. FENCING SHALL BE AT LEAST FOUR FEET HIGH, CONSTRUCTED OF CHAIN LINK, OR POLYETHYLENE LAMINAR SAFETY FENCING OR SIMILAR MATERIAL, SUBJECT TO APPROVAL BY THE DIRECTOR.

TP.4. RETAIN SMALL TREES, BUSHES AND UNDER-STORY PLANTS WITHIN THE TREE PROTECTION ZONE.

TP.5. POST "TREE PROTECTION AREA" SIGNS ON ALL SIDES OF THE FENCED AREAS.

TP.6. DO NOT ALLOW FILL, EXCAVATION, THE STORAGE OF TOOLS, EQUIPMENT, CONSTRUCTION MATERIALS OR STOCKPILE SOIL OR TRAFFIC OR UTILITY CONSTRUCTION INCLUDING IRRIGATION SYSTEMS WITHIN THE DRIP-LINE AREAS OF TREES THAT ARE TO BE RETAINED.

TP.7. PROTECT AS MUCH OPEN SOIL SURFACE BELOW THE TREE'S CROWN (AND OUTSIDE THE FENCED TREE PROTECTION ZONE) AS POSSIBLE.

TP.8. WHEN TRENCHING NEAR PROTECTED TREES, ALLOW ONLY HAND-DIGGING WITHIN THE TREE PROTECTION ZONE. TUNNEL UNDER ROOTS GREATER THAN 1" IN DIAMETER. CLEANLY CUT TORN ROOTS TO THE EDGE OF THE TRENCH. COVER EXPOSED ROOTS WITH VISQUEEN OR LIKE MATERIAL AND KEEP MOIST DURING OPEN GROUND PROCEDURES.

POST CONSTRUCTION

TP.9. SOIL AERATION MAY BE NECESSARY IN SITUATIONS WHERE COMPACTION HAS OCCURRED. IDENTIFY APPROPRIATE PROCEDURES AND SPECIFICATIONS FROM A CERTIFIED ARBORIST.

TP.10. PRUNE TREES FOLLOWING CONSTRUCTION TO REMOVE DEADWOOD TO ENCOURAGE REGROWTH. TREES SHOULD BE MONITORED THROUGHOUT THE CONSTRUCTION PROCESS FOR ANY INCREASE IN HAZARD POTENTIAL.

SITE GRADING CONDITIONS (SG)

SG.1. BEFORE ANY CLEARING OR GRADING OCCURS, MARK CLEARING LIMITS WITH CONSTRUCTION FENCE/SILT FENCE IN A PROMINENT AND DURABLE MANNER. MAINTAIN UNTIL FINAL APPROVAL.

SG.2. NO SLOPE OF CUT AND FILL SURFACES SHALL BE STEEPER THAN IS SAFE FOR THE INTENDED USE AND SHALL NOT EXCEED THREE (3) HORIZONTAL TO ONE (1) VERTICAL, UNLESS OTHERWISE APPROVED.

SG.3. THE GROUND SURFACE SHALL BE PREPARED TO RECEIVE FILL BY REMOVING UNSUITABLE MATERIAL SUCH AS CONCRETE SLABS, TREE STUMPS AND BRUSH.

SG.4. PROVISIONS SHALL BE MADE TO PREVENT ANY SURFACE WATER OR SEEPAGE FROM DAMAGING THE CUT FACE OF ANY EXCAVATION OR THE SLOPING FACE OF A FILL. CARRY ANY SURFACE WATER THAT IS OR MIGHT BE CONCENTRATED AS A RESULT OF A FILL OR EXCAVATION TO A NATURAL WATERCOURSE OR DESIGNATED RETENTION FACILITY. PREVENT ANY SEDIMENT FROM LEAVING THE SITE.

SG.5. ACCESS ROADS TO GRADING SITES SHALL BE MAINTAINED AND LOCATED TO THE SATISFACTION OF THE CITY OF SHORELINE, TO MINIMIZE THE PROBLEMS OF DUST, MUD AND CIRCULATION.

SG.6. SIGNS OF WARNING OF HAZARDOUS CONDITIONS, IF SUCH EXIST, SHALL BE AFFIXED AT LOCATIONS AS REQUIRED BY THE ENGINEER.

SG.7. FENCING, WHERE REQUIRED, TO PROTECT LIFE, LIMB AND PROPERTY, SHALL BE INSTALLED WITH LOCKABLE GATES WHICH MUST BE CLOSED AND LOCKED WHEN NOT WORKING THE SITE. THE FENCE MUST BE NO LESS THAN FIVE (5) FEET IN HEIGHT AND THE FENCE MATERIAL SHALL HAVE NO HORIZONTAL OPENING LARGER THAN TWO (2) INCHES.

SG.8. THE TOPS AND THE TOES OF CUT AND FILL SLOPES SHALL BE SET BACK FROM STRUCTURES AS FAR AS IS NECESSARY FOR ADEQUACY OF FOUNDATION SUPPORT AND TO PREVENT DAMAGE AS A RESULT OF WATER RUNOFF OR EROSION OF THE SLOPES/ROADWAY EMBANKMENT.

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GENERAL NOTES

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ONE INCH AT FULL SIZE

IF NOT ONE INCH SCALE ACCORDINGLY

Project No. 18-06771-000

Sheet G-1.2

Sheet 3 Of x

HERRERA

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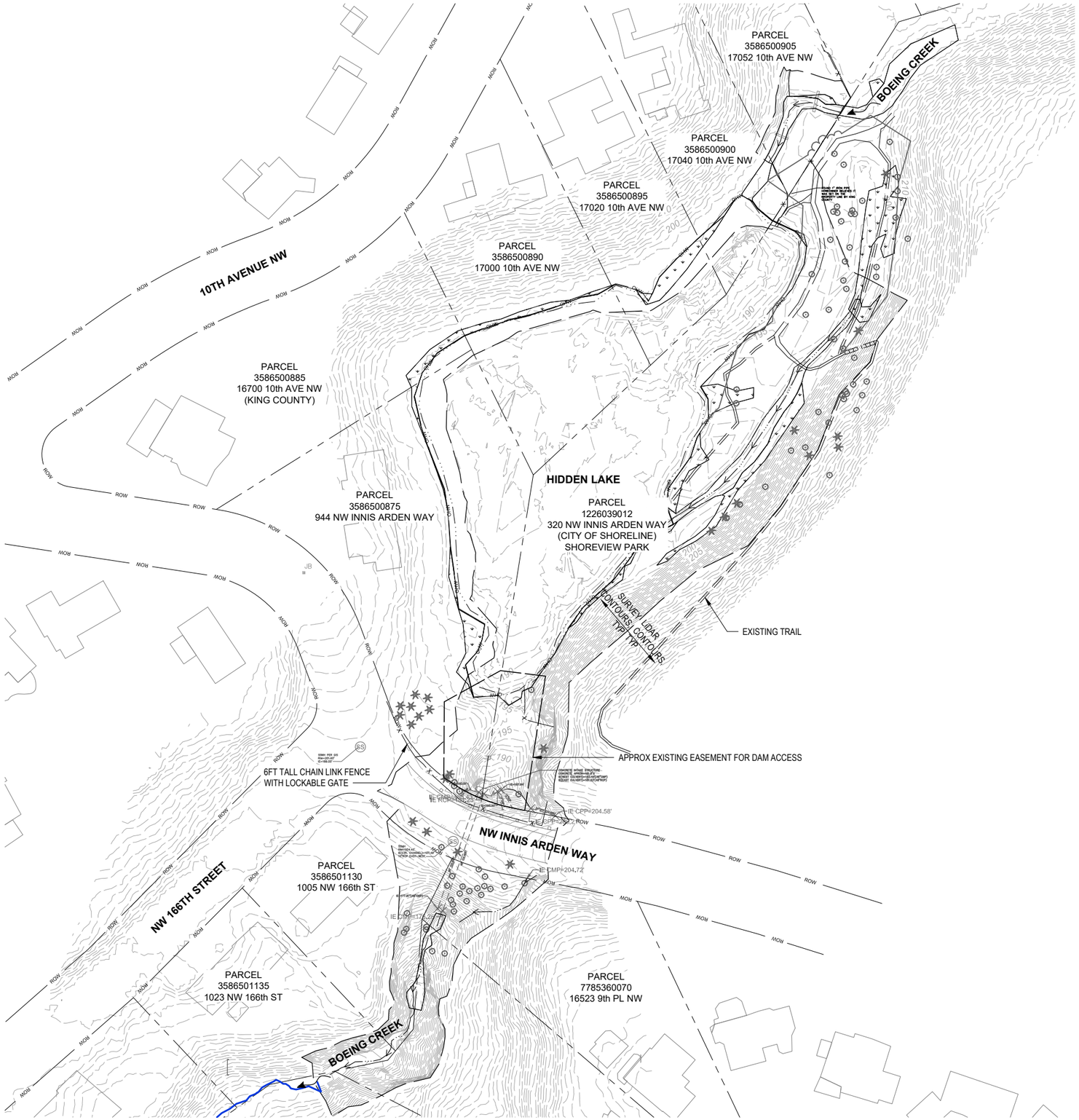

HIDDEN LAKE IN FEBRUARY 2015, STANDING ON DAM LOOKING NORTH

GENERAL NOTES:

1. SEE DWG G-1.1 FOR ABBREVIATIONS AND LEGEND.

STATISTICS

EQUIPMENT: TRIMBLE VX ROBOTIC TOTAL STATION.
METHODOLOGY: FIELD TRAVERSE.
MEETS OR EXCEEDS SURVEY STANDARD AS PER:
WAC 332-130-050
WAC 332-130-090
WAC 332-130-100
ALL SURVEY WORK OCCURRED IN SEPTEMBER 2015 AND NOVEMBER 2018

SURVEYOR'S NOTES

1. ALL UNDERGROUND UTILITY LOCATIONS ARE BASED ON OBSERVED EVIDENCE OF STRUCTURES. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION PROVIDED.

2. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A COMPLETE TITLE REPORT, WHICH MAY REVEAL ADDITIONAL RESTRICTIONS AND EASEMENTS OF RECORD.

3. NOT ALL TREES WITHIN PROJECT AREA WERE SURVEYED.

N

50 0 50 100
1"=50'

HERRERA

	Description	Date	Initials
Drawn			EM
Designed			IBM, VW
Checked			ME
Revisions			
Revisions			

JAN D. MOSTERT — STATE OF WASHINGTON — 36069 — REGISTERED PROFESSIONAL ENGINEER
DRAFT

CITY OF SHORELINE

17500 Midvale Avenue North
Shoreline, WA 98133
(206) 801-2700

HIDDEN LAKE DAM REMOVAL

60 PCT DESIGN - NOT FOR CONSTRUCTION

EXISTING CONDITIONS

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Sheet G-2.0

Sheet 4 Of x

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PARCEL
3586500885
16700 10th AVE NW
(KING COUNTY)

PARCEL
3586500890
17000 10th AVE NW

PARCEL
3586500895
17020 10th AVE NW

PARCEL
3586500900
17040 10th AVE NW

PARCEL
3586500905
17052 10th AVE NW

PARCEL
3586500875
944 NW INNIS ARDEN WAY

TEMPORARY CONSTRUCTION EASEMENT, TYP

SURVEY LIDAR CONTOURS, CONTOURS, TYP

1 C-6.2 REVETMENT STRUCTURE, TYP

1 C-6.1 HABITAT TYPE 3 STRUCTURE, TYP

DRAINAGE SWALE, TYP

PROPOSED CHANNEL

WETLAND CREATION AREA

ACCESS ROAD

PROJECT LIMITS

NW INNIS ARDEN WAY

1 C-6.0 HABITAT TYPE 1 STRUCTURE, TYP

2 C-6.0 HABITAT TYPE 2 STRUCTURE, TYP

REGRADE LAKE BED

2 C-6.1 RAPTOR PERCH, TYP

PARCEL
1226039012
320 NW INNIS ARDEN WAY
(CITY OF SHORELINE)
SHOREVIEW PARK

REMOVE DAM, SEE DWGS C-3.0 AND C-4.0

SEE DWG C-1.1 FOR TRAIL IMPROVEMENTS

FUTURE CULVERT LOCATION

GENERAL NOTES:

1. SEE DWG G-1.1 FOR ABBREVIATIONS AND LEGEND.
2. SEE DWG XX FOR SURVEY CONTROL.

30 0 30 60
1"=30'

	Initials	Date	Description
Drawn	EM		
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Revisions			
Revisions			

IAN B. MOSTRE — STATE OF WASHINGTON — 36069 — REGISTERED PROFESSIONAL ENGINEER

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CITY OF SHORELINE

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Shoreline, WA 98133
(206) 801-2700

HIDDEN LAKE DAM REMOVAL

60 PCT DESIGN - NOT FOR CONSTRUCTION

PROPOSED SITE PLAN

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Sheet C-1.0

Sheet 5 Of x

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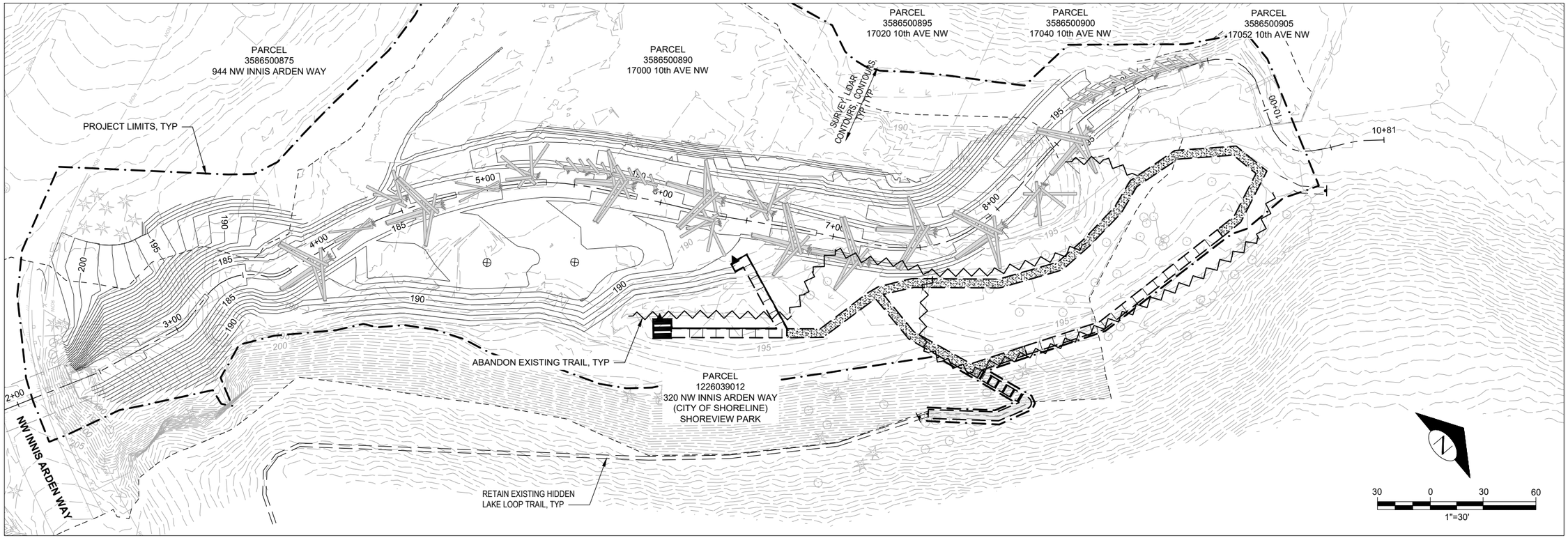

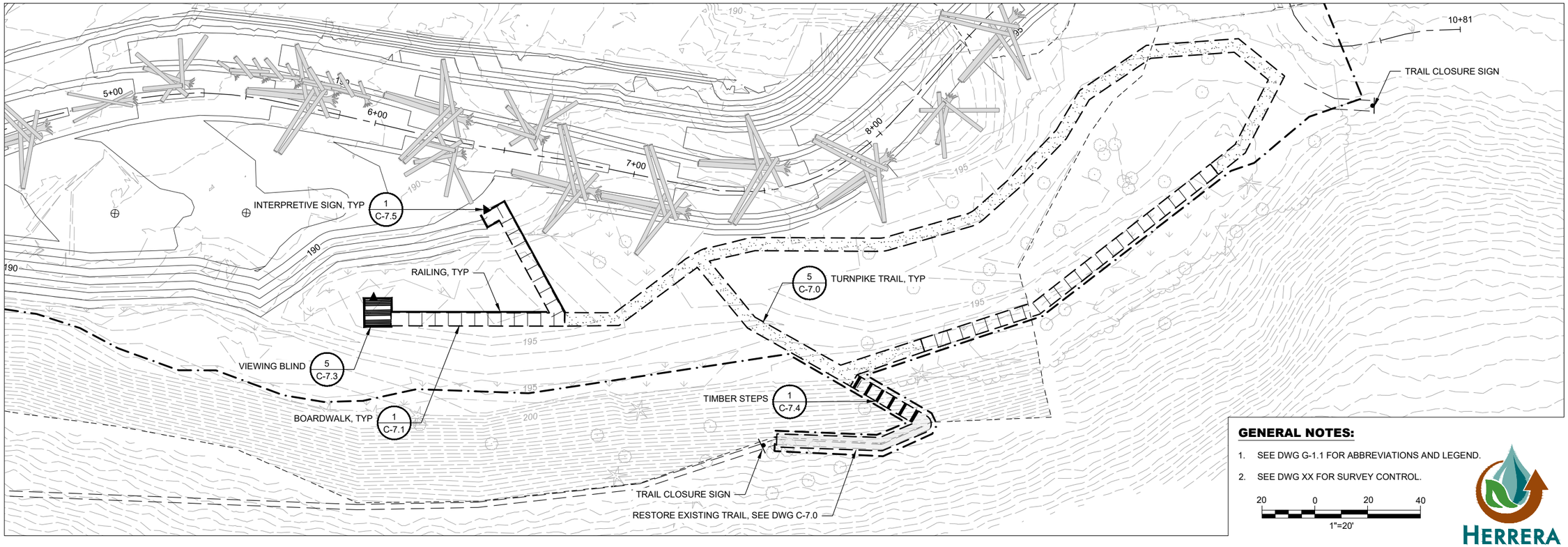

GENERAL NOTES:

1. SEE DWG G-1.1 FOR ABBREVIATIONS AND LEGEND.
2. SEE DWG XX FOR SURVEY CONTROL.

20 0 20 40
1"=20'

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HIDDEN LAKE DAM REMOVAL

60 PCT DESIGN - NOT FOR CONSTRUCTION

PROPOSED TRAIL IMPROVEMENTS

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Project No. 18-06771-000

Sheet C-1.1

Sheet 6 Of x

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PARCEL
3586500875
944 NW INNIS ARDEN WAY

PARCEL
3586500890
17000 10th AVE NW

PARCEL
3586500895
17020 10th AVE NW

PARCEL
3586500900
17040 10th AVE NW

PARCEL
3586500905
17052 10th AVE NW

PROJECT LIMITS

TRANSITION FROM HVF TO HVSF

TRANSITION FROM HVF TO HVSF

CONSTRUCTION STAGING AREA

HIGH VISIBILITY SILT FENCE, TYP

ACCESS ROAD, TYP

ACCESS ROAD THROUGH STAGING AREA
WILL VARY BASED ON CONSTRUCTION
SEQUENCING AND MEANS AND METHODS

EROSION CONTROL BLANKET
ON GRADED SLOPE

STABILIZED
CONSTRUCTION
ENTRANCE PER WSDOT
STD PLAN I-80.10-02

SILT FENCE

BYPASS PIPE

HIGH VISIBILITY FENCE, TYP

SANDBAG DIVERSION DAM, TYP

PRESERVE EXISTING VEGETATION AND WETLANDS

STREAM FLOW BYPASS, OPEN CHANNEL

APPROX EXISTING EASEMENT FOR DAM ACCESS

PARCEL
1226039012
320 NW INNIS ARDEN WAY
(CITY OF SHORELINE)
SHOREVIEW PARK

NW INNIS ARDEN WAY

30 0 30 60
1"=30'

HERRERA

	Description	Date	Initials	
			EM	Drawn
			IBM, VW	Designed
			ME	Checked
				Revisions
				Revisions

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HIDDEN LAKE DAM REMOVAL

60 PCT DESIGN - NOT FOR CONSTRUCTION

TEMPORARY EROSION AND SEDIMENT CONTROL PLAN

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Project No. 18-06771-000

Sheet C-2.0

Sheet 7 Of x

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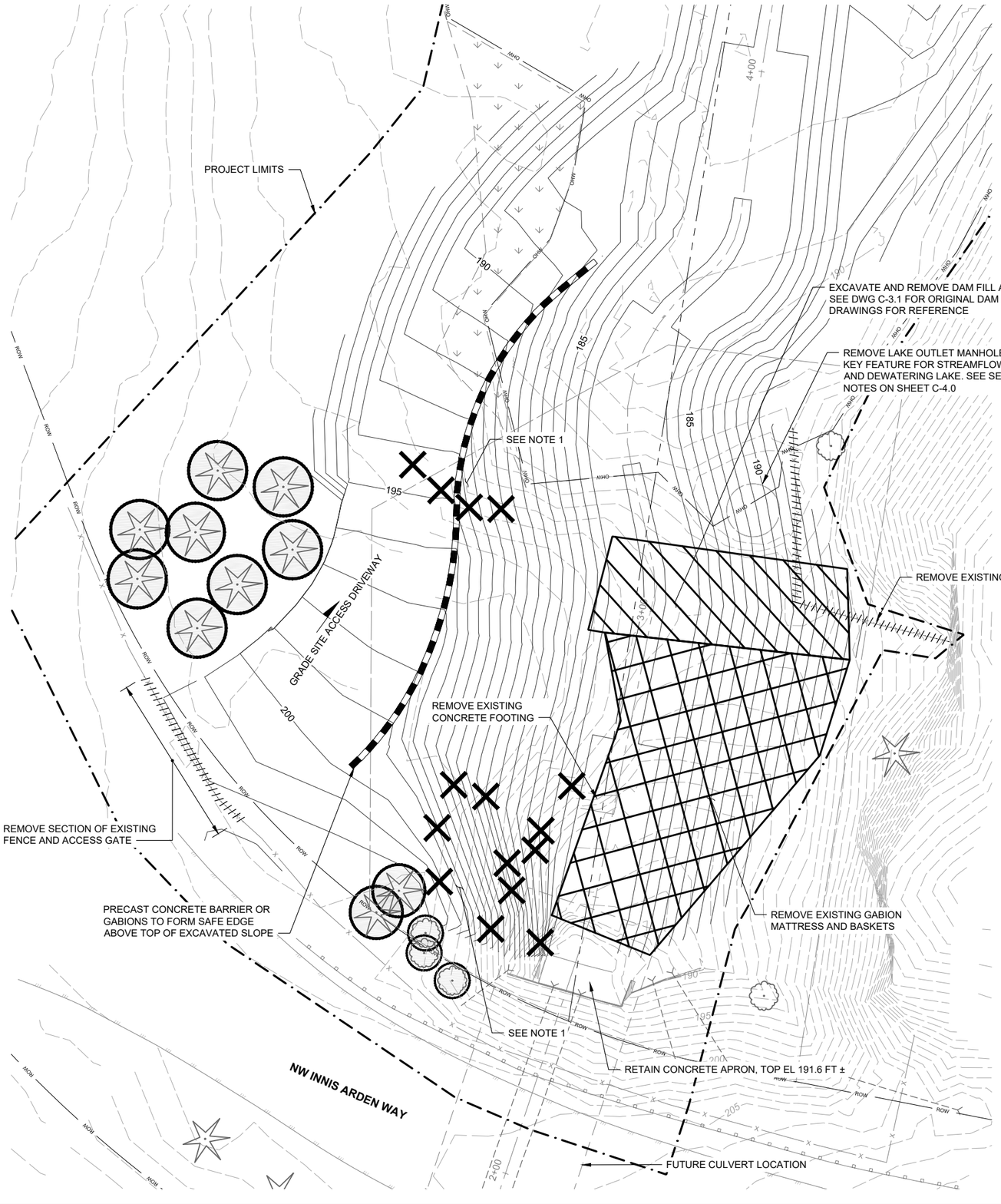

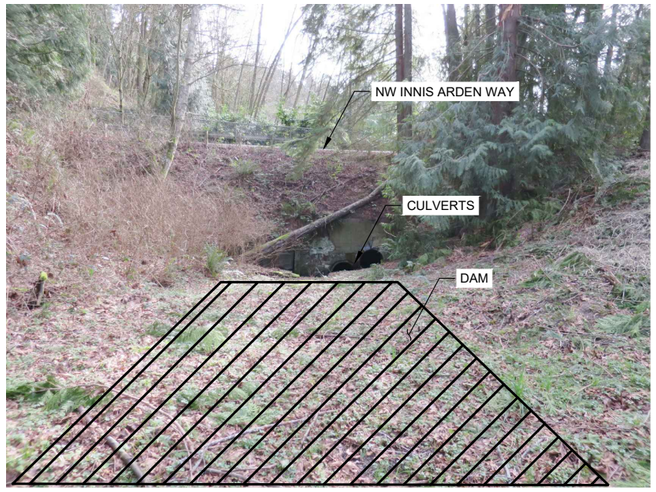

LOOKING SOUTH FROM DAM CREST TOWARD CULVERTS AND NW INNIS ARDEN WAY

LOOKING NORTH AT DAM FROM NW INNIS ARDEN WAY

GENERAL NOTES:

1. SEE DWG G-1.1 FOR ABBREVIATIONS AND LEGEND.

NOTES:

1. ENGINEER TO FLAG TREES TO SALVAGE. SALVAGE BRANCHES AND LOGS WITH INTACT ROOTWADS FROM CEDAR TREES LARGER THAN 10" DIAMETER AT BREAST HEIGHT FOR USE IN HABITAT LOG STRUCTURES (SEE SHEET X). SALVAGE REMAINDER OF ALL REMOVED TREES FOR WOOD CHIP MULCHING AS PART OF ONSITE EROSION AND SEDIMENT CONTROL PLAN, SEE SHEET C-2.0.

N

10 0 10 20
1"=10'

HERRERA

	Initials	Date	Description
Drawn	EM		
Designed	IBM, VW		
Checked	ME		
Revisions			
Revisions			

DRAFT
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HIDDEN LAKE DAM REMOVAL

60 PCT DESIGN - NOT FOR CONSTRUCTION

SITE ACCESS AND DAM REMOVAL PLAN

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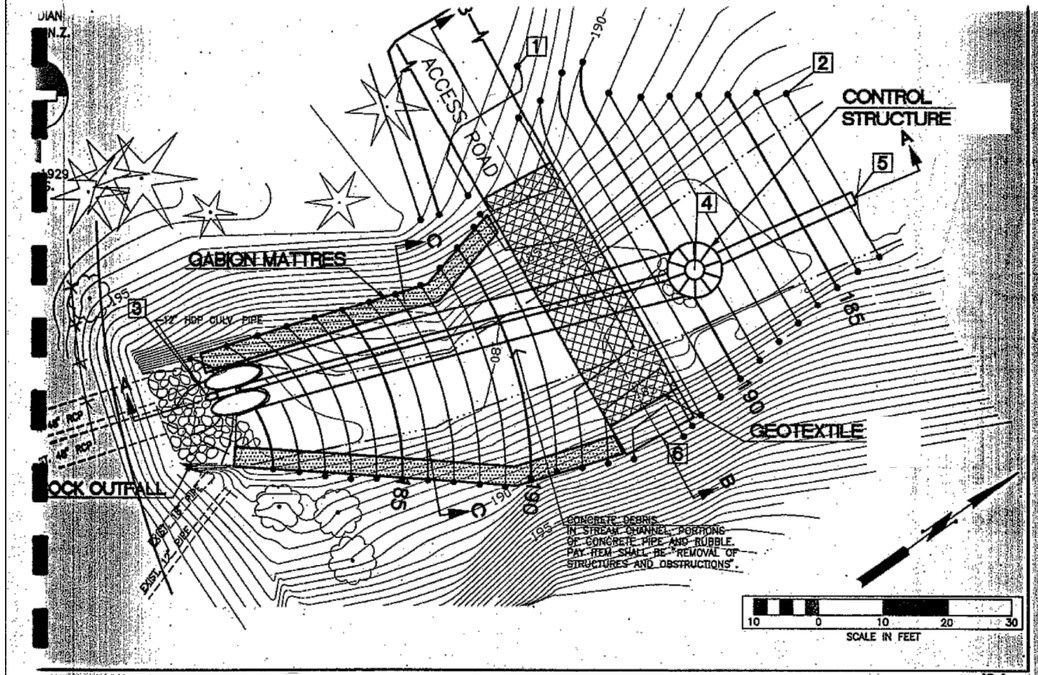
Sheet C-3.0

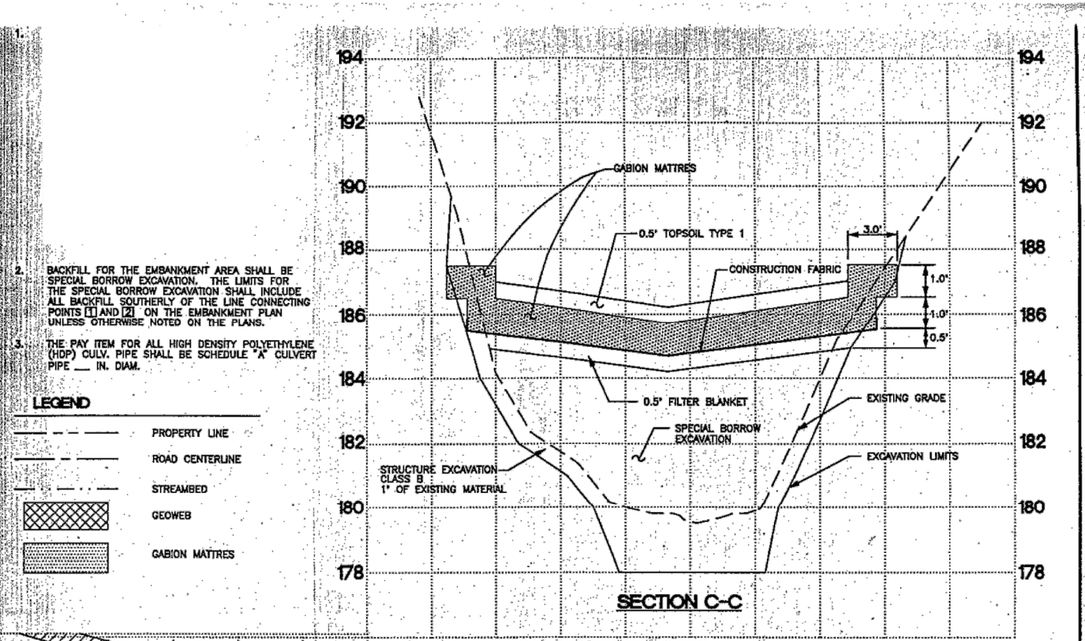
Sheet 8 Of x



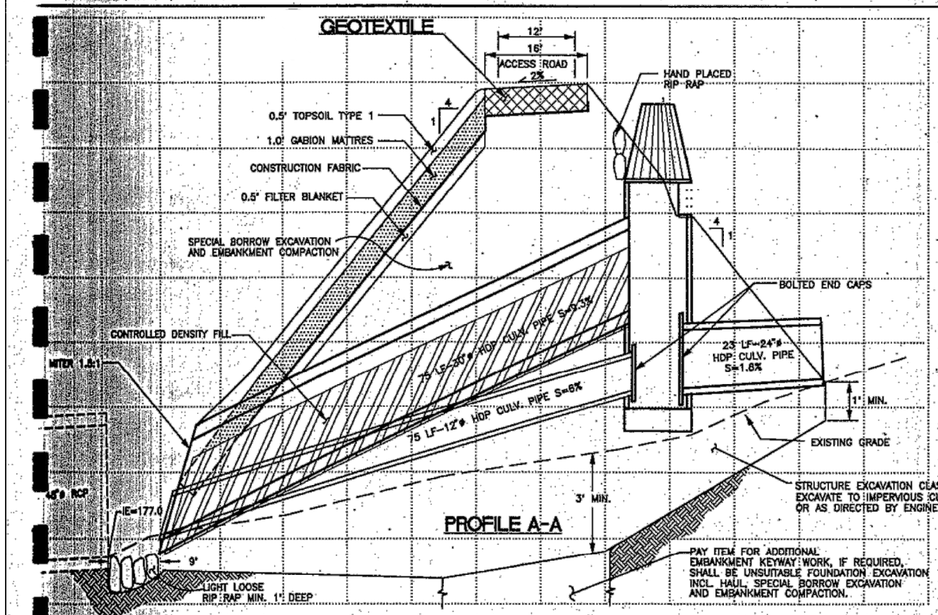
1. .
2. BACKFILL FOR THE EMBANKMENT AREA SHALL BE SPECIAL BORROW EXCAVATION. THE LIMITS FOR THE SPECIAL BORROW EXCAVATION SHALL INCLUDE ALL BACKFILL SOUTHERLY OF THE LINE CONNECTING POINTS [1] AND [2] ON THE EMBANKMENT PLAN UNLESS OTHERWISE NOTED ON THE PLANS.
3. THE PAY ITEM FOR ALL HIGH DENSITY POLYETHYLENE (HDP) CULV. PIPE SHALL BE SCHEDULE "A" CULVERT PIPE ___ IN. DIAM.

LEGEND

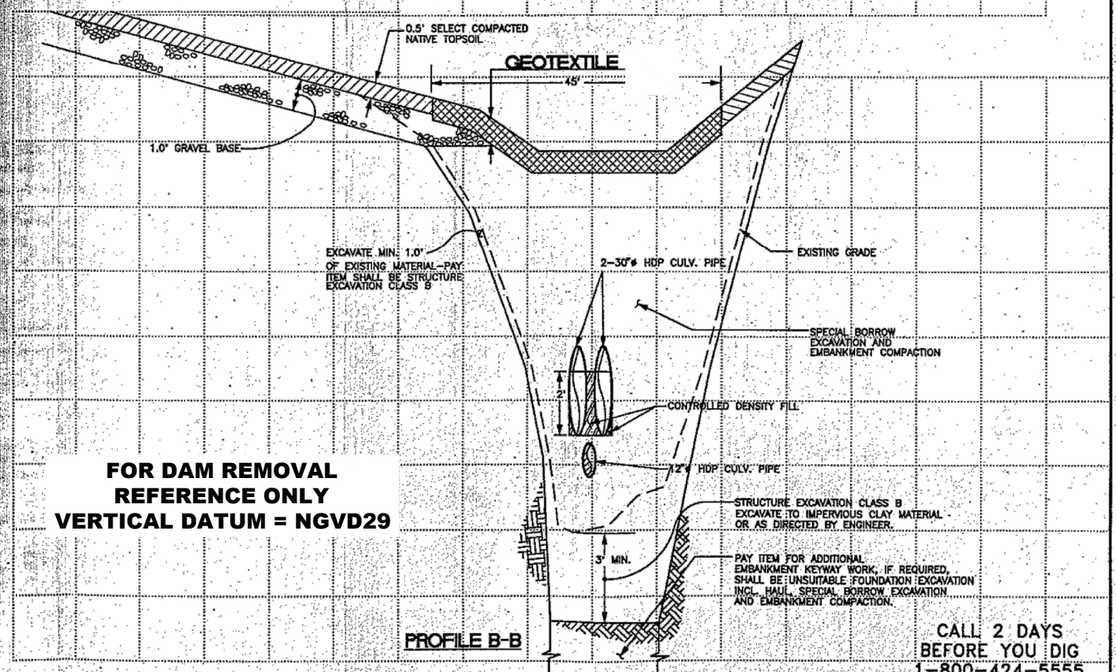
- PROPERTY LINE
- ROAD CENTERLINE
- STREAMBED
- GEOWEB
- GABION MATTRES



SECTION C-C



PROFILE A-A



PROFILE B-B

FOR DAM REMOVAL
REFERENCE ONLY
VERTICAL DATUM = NGVD29

CALL 2 DAYS BEFORE YOU DIG 1-800-424-5555

MAY. W.	5/94	
WJS	5/94	
WHITFIELD. M.	7/95	
W.O.M.	5/94	

APPROVED: LARRY GIBBONS, P.E. DATE: 4/96
PROJECT MANAGER: TIM KELLY P.E. DATE: 4/96
DESIGNED: TIM KELLY, P.E. DATE: 4/96

PROJECT No. OA1755
SURVEY No. 12-23-4-59

LARRY R. GIBBONS STATE OF WASHINGTON 12956 REGISTERED PROFESSIONAL ENGINEER

KING COUNTY NATURAL RESOURCES
PAM BISSONNETTE, DIRECTOR
SURFACE WATER MANAGEMENT DIVISION
HIDDEN LAKE RESTORATION

SHEET 8 OF 14

	Initials	Date	Description
Drawn	EM		
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Revisions			

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JAN R. MOSTRE STATE OF WASHINGTON 36069 REGISTERED PROFESSIONAL ENGINEER

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Shoreline, WA 98133
(206) 801-2700

HIDDEN LAKE DAM REMOVAL
60 PCT DESIGN - NOT FOR CONSTRUCTION

EXISTING DAM ORIGINAL DESIGN DETAILS

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Project No. 18-06771-000

Sheet C-3.1

Sheet 9 Of x

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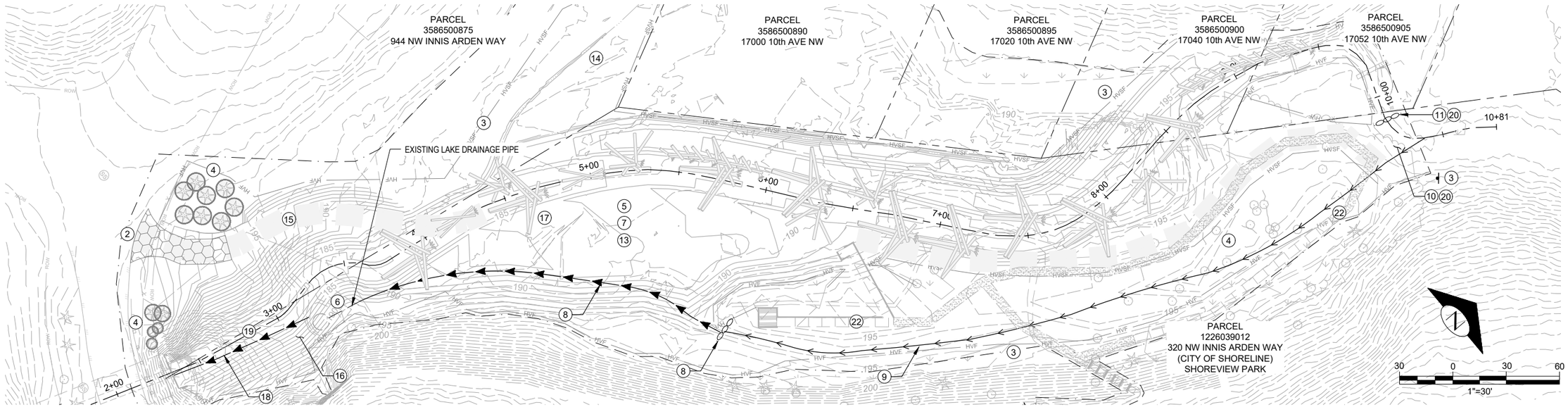

CONSTRUCTION SEQUENCING:

1. CONTRACTOR SHALL SUBMIT PLANS FOR FISH EXCLUSION, STREAM BYPASS, AND TEMPORARY EROSION AND SEDIMENT CONTROL FOR ENGINEER'S APPROVAL PRIOR TO STARTING ANY WORK.
2. INSTALL INITIAL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES - INCLUDING STABILIZED CONSTRUCTION ENTRANCE - TO PROTECT BOEING CREEK FROM SEDIMENT AND OTHER POTENTIAL POLLUTANTS FROM CONSTRUCTION ACTIVITIES, SEE DWG C-2.0.
3. INSTALL TEMPORARY CONSTRUCTION FENCING AND OTHER MEASURES (INCLUDING SIGNAGE AND TRAIL DETOURS) AS NEEDED TO EXCLUDE PUBLIC (INCLUDING TRAIL USERS WITHIN THE PARK) FROM ACTIVE CONSTRUCTION AREAS, SEE DWG C-2.0.
4. INSTALL FENCING AND OTHER MEASURES TO PROTECT EXISTING TREES AND NATIVE VEGETATION TO REMAIN FROM CONSTRUCTION ACTIVITIES, SEE DWG C-2.0.
5. COMPLETE FISH AND OTHER AQUATIC LIFE EXCLUSION/RELOCATION FROM HIDDEN LAKE AND ALL PORTIONS OF BOEING CREEK TO BE BYPASSED.
6. DRAIN THE LAKE. USE EXISTING LAKE OUTLET MANHOLE STRUCTURE AND LAKE DRAIN PIPES CONNECTED TO IT TO DRAIN THE LAKE TO THE MAXIMUM EXTENT POSSIBLE.
   a. THE DOWNSTREAM END OF THE LAKE DRAIN PIPE WITHIN THE MANHOLE STRUCTURE FEATURES A CLOSED GATE VALVE. DRAINING THE LAKE VIA THE EXISTING LAKE DRAIN PIPE WILL REQUIRE OPENING THIS VALVE. CONTRACTOR MAY BE REQUIRED TO OBTAIN PARTS NEEDED TO OPERATE VALVE.
   b. FOR THE LAKE DRAIN PIPE TO FUNCTION, A SPECIAL OUTLET PIPE WITHIN THE EXISTING LAKE OUTLET MANHOLE STRUCTURE (WHICH IS LOWER IN ELEVATION THAN THE REGULAR TWIN OUTLET PIPES) NEEDS TO BE OPENED. ORIGINAL DESIGN DRAWINGS SHOW THIS PIPE AS FEATURING A BOLTED END CAP. CONTRACTOR SHALL LOCATE THIS LOWER OUTLET PIPE WITHIN THE OUTLET STRUCTURE AND OPEN IT.
   c. THE UPSTREAM END OF THE LAKE DRAIN PIPE (APPROX 23 LF FROM STRUCTURE) MAY BE BURIED BY UP TO 3 TO 4 FEET OF SEDIMENT (BASED ON 2015 BATHYMETRY). CONTRACTOR WILL LIKELY NEED TO DREDGE THE LAKE BED TO LOCATE AND MAKE FUNCTIONAL FOR LAKE DRAINAGE THIS END OF THE LAKE DRAIN PIPE.
   d. IN ORDER TO DRAIN THE LAKE TO A WATER SURFACE ELEVATION OF APPROXIMATELY 188 FEET (NAVD88) OR LOWER, CONTRACTOR MAY BE REQUIRED TO FURTHER DREDGE A TEMPORARY LAKE DRAINAGE/STREAMFLOW CHANNEL EXTENDING UP TO 50 FEET NORTH OF THE EXISTING LAKE DRAIN PIPE END, IN ORDER TO CONNECT THE PIPE TO THE LOWER ELEVATION PORTIONS OF THE LAKE BOTTOM (PER 2015 BATHYMETRY).
   e. CONTRACTOR WILL NEED TO EXCLUDE STREAMFLOW FROM ANY DREDGING AREAS (BY USE OF COFFER DAM, SILT CURTAIN, AND/OR TEMPORARY PUMPING, ETC.) TO PROTECT BOEING CREEK FROM SEDIMENT RAISED BY DREDGING AND OTHER ACTIVITIES. CONTRACTOR'S METHODS SHALL PREVENT ANY CONSTRUCTION-RELATED SEDIMENT FROM ENTERING BOEING CREEK PER PERMIT REQUIREMENTS.
   f. ONCE FULLY OPERABLE AND CONNECTED AS DESCRIBED ABOVE, USE OF THE EXISTING LAKE DRAIN PIPE SHOULD ENABLE DRAINING THE LAKE TO A WATER SURFACE ELEVATION OF APPROXIMATELY 188 FEET (NAVD88) OR LOWER.
7. CONTRACTOR SHALL TEMPORARILY BRIDGE THE LAKE DRAINAGE/STREAMFLOW CHANNEL (USING STEEL PLATES AND/OR TEMPORARY CULVERT PIPES) TO ALLOW HEAVY EQUIPMENT TO ACCESS UPSTREAM PROJECT WORK AREAS ALONG THE EAST SIDE OF THE DRAINED LAKE BED. AT NO POINT SHALL HEAVY EQUIPMENT BE ALLOWED TO DRIVE THROUGH AND/OR OPERATE IN ANY PORTION OF THE WATER BODY ACTIVELY CONNECTED TO BOEING CREEK. CONTRACTOR SHALL PROTECT BOEING CREEK FROM SEDIMENT AND OTHER POTENTIAL POLLUTANTS FROM HEAVY EQUIPMENT OPERATION AND OTHER CONSTRUCTION ACTIVITIES.
8. CONTRACTOR SHALL INSTALL APPROXIMATELY 220 LF OF 24" DIAMETER HDPE TEMPORARY STREAMFLOW BYPASS PIPE TO CONNECT DOWNSTREAM END OF EXISTING BYPASS CHANNEL (APPROX IE=193.0) ALONG THE EAST SIDE OF THE LAKE AREA TO THE EXISTING LAKE DRAIN PIPE (APPROX IE=186.7) CONNECTED TO THE LAKE OUTLET STRUCTURE. TEMPORARY STREAMFLOW BYPASS PIPE SLOPE WILL BE APPROXIMATELY 2.8%. PIPE SHALL BE INSTALLED IN A LOCATION AND MANNER WHICH ALLOWS FOR UNIFORM SLOPE (AND MAY REQUIRE TRENCHING TO INSTALL). THE UPSTREAM END OF THIS BYPASS PIPE WILL REQUIRE A SANDBAG DIVERSION DAM APPROXIMATELY 25 FT WIDE BY 3 FT HIGH TO ENSURE BYPASSED STREAMFLOW IS ROUTED INTO BYPASS PIPE.
9. UTILIZE EXISTING STREAMFLOW BYPASS (SIDE) CHANNEL TO ROUTE STREAMFLOW TO THE TEMPORARY STREAMFLOW BYPASS PIPE AND CHECKDAM. SURVEY INDICATES THIS EXISTING CHANNEL IS APPROXIMATELY 360 FEET LONG, 6 TO 10 FEET WIDE, MINIMUM 2 FEET DEEP, AND WITH AN AVERAGE SLOPE OF 0.5% TO 1%. THIS EXISTING CHANNEL IS EXPECTED TO SUFFICE FOR LOW FLOW STREAM BYPASS CONDITIONS WITHOUT ONLY MINOR MODIFICATIONS NEEDED (SUCH AS REMOVING EXISTING PLANK BRIDGE) TO ENSURE THROUGH BYPASSED STREAMFLOW CAN OCCUR WITHOUT SIGNIFICANT BLOCKAGE. THIS CHANNEL IS LINED WITH WETLANDS ON BOTH SIDES WHICH THE CONTRACTOR SHALL TAKE CARE NOT TO DISTURB.
10. AT THE UPSTREAM END OF THE STREAM BYPASS SYSTEM, THE CONTRACTOR SHALL EXCAVATE A NOTCH IN THE EXISTING TRAIL PRISM NEAR STA 10+25 TO ELEVATION 196 FEET (NAVD88) WITH ENOUGH WIDTH TO PASS A MODERATE FLOOD EVENT (OF UP TO XX CFS) THAT MAY OCCUR DURING NEW STREAM CHANNEL CONSTRUCTION, CREATING AN OPEN CHANNEL STREAMFLOW BYPASS PATHWAY.
11. INSTALL SAND BAG DIVERSION DAM ACROSS EXISTING BOEING CREEK MAIN CHANNEL IN VICINITY OF STA 10+15, FORCING FLOW TO THE SOUTH THROUGH NEW BYPASS NOTCH/CHANNEL, INTO THE EXISTING BYPASS SIDE CHANNEL, INTO THE TEMPORARY BYPASS PIPE DOWNSTREAM OF THE EXISTING SIDE CHANNEL, AND INTO THE EXISTING LAKE OUTLET STRUCTURE. ENSURE THE BYPASS SYSTEM IS FULLY INTACT, CONTINUOUS, AND OPERATIONAL PRIOR TO DIVERTING FLOWS.
12. CONFIRM ALL STREAMFLOW IS BEING ROUTED THROUGH AND CONTAINED WITHIN THE BYPASS SYSTEM FROM THE UPSTREAM DIVERSION ALL THE WAY TO AND THROUGH THE LAKE OUTLET MANHOLE STRUCTURE BEFORE COMMENCING WITH ANY FURTHER WORK.
13. ONCE STREAMFLOW BYPASS SYSTEM IS IN PLACE AND OPERATIONAL, SUFFICIENTLY DRY AREAS OF THE FORMER LAKE BED WITHIN CITY PROPERTY CAN BE USED FOR ACCESS, STAGING, STOCKPILING, AND PLACEMENT OF SUITABLE EXCAVATION SPOILS AS FILL WITHIN DESIGNATED AREAS.
14. EXCAVATE LAKE DRAINAGE SWALE AND/OR PUMP TO DRAIN REMAINING LAKE WATER SURFACE ELEVATION FROM APPROXIMATELY 188 FEET (NAVD88) TO APPROXIMATELY 186 FEET OR LOWER, SUFFICIENT TO ALLOW FOR PROPOSED STREAM CHANNEL CONSTRUCTION WITHOUT REQUIRING IN-WATER EXCAVATION. CONTRACTOR'S METHODS SHALL PREVENT ANY CONSTRUCTION-RELATED SEDIMENT FROM ENTERING BOEING CREEK PER PERMIT REQUIREMENTS. ISOLATED SMALL, SHALLOW POOLS ON THE WEST SIDE OF THE LAKE (OUTSIDE OF THE PROPOSED CHANNEL EXTENTS) MAY REMAIN FOLLOWING DRAINAGE SWALE EXCAVATION.
15. INSTALL CONSTRUCTION ACCESS ROAD FROM NW INNIS ARDEN WAY AS SHOWN ON SHEET C-4.0. ANY TREES REMOVED FOR ACCESS ROAD CONSTRUCTION SUITABLE FOR REUSE IN PROJECT HABITAT STRUCTURES SHALL BE STOCKPILED ON-SITE.
16. EXCAVATE THE TOP OF THE DAM DOWN TO ELEVATION 190 (NAVD88). TO PREVENT WATER QUALITY IMPACTS, MAINTAIN THE LAKE OUTLET MANHOLE STRUCTURE, MONITOR EXCAVATION NEAR THE PIPES CONNECTED TO THAT MANHOLE STRUCTURE WHICH ARE ACTIVELY CONVEYING STREAMFLOW, AND ENSURE CREEK WATER DOES NOT IMPOUND BEHIND THE DAM SO THAT FLOW CANNOT PASS OVER THE TOP OF THE EXCAVATED PORTION OF THE DAM.
17. WORKING UPSTREAM OF APPROXIMATE STATION 3+25, EXCAVATE PROPOSED STREAM CHANNEL, EXCAVATE AND GRADE WETLAND AREA, AND INSTALL LOG STRUCTURES. IT IS RECOMMENDED THE CONTRACTOR WORK TO CONSTRUCT NEW CHANNEL FROM DOWNSTREAM TO UPSTREAM AND UTILIZE THE DOWNSTREAM-MOST PORTION OF NEW CHANNEL AS A SUMP FOR SITE DEWATERING AS NEEDED. NEAR STA 3+85 CONTRACTOR SHALL REMOVE EARLIER TEMPORARY BRIDGE OVER LAKE DRAINAGE CHANNEL AND REINSTALL NEW TEMPORARY BRIDGE OVER THE NEW RESTORED STREAM CHANNEL (USING STEEL PLATES AND/OR TEMPORARY CULVERT PIPES) TO ALLOW HEAVY EQUIPMENT TO ACCESS UPSTREAM WORK AREAS. CONTRACTOR SHALL WORK AROUND ACTIVE STREAM BYPASS SYSTEM AND ENSURE BOEING CREEK WATER QUALITY REMAINS UNIMPACTED BY CONSTRUCTION ACTIVITIES.
18. INSTALL A BYPASS PIPE AND/OR PUMP SYSTEM TO CONNECT TO BYPASS SYSTEM UPSTREAM OF DAM AND ROUTE ALL STREAMFLOW AROUND THE DAM AREA AND INTO THE CULVERTS BENEATH NW INNIS ARDEN WAY. ONCE THE DAM AREA BYPASS SYSTEM IS CONNECTED TO THE UPSTREAM BYPASS AND IS FULLY FUNCTIONING, REMOVE THE REMAINING DAM EMBANKMENT BELOW ELEVATION 190 FEET, THE PIPES BURIED WITHIN THE DAM, AND THE LAKE OUTLET MANHOLE STRUCTURE. EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE TO PREVENT ANY BOEING CREEK WATER QUALITY IMPACTS DURING THIS TIME.
19. EXCAVATE THE REMAINING LENGTH OF STREAM CHANNEL FROM APPROXIMATELY STA 3+25 DOWNSTREAM/SOUTH TO THE EXISTING CONCRETE PAD IMMEDIATELY UPSTREAM OF THE EXISTING CULVERTS UNDER NW INNIS ARDEN WAY.
20. ONCE THE NEW STREAM CHANNEL CONSTRUCTION IS FULLY COMPLETE, INSPECTED, AND APPROVED AS READY FOR STREAMFLOW, GRADUALLY REMOVE THE UPSTREAM SAND BAG DIVERSION DAM AND BLOCK OFF THE UPSTREAM END OF THE BYPASS NOTCH/CHANNEL TO INTRODUCE ALL BOEING CREEK STREAMFLOW INTO THE NEW STREAM CHANNEL. REMOVE ANY DOWNSTREAM BYPASS SYSTEM COMPONENTS WITHIN THE NEW CHANNEL. BACKFILL THE FLOW DIVERSION NOTCH, AND RESTORE STREAM EMBANKMENT AND TRAIL PRISM NEAR STA 10+25. REMOVE ALL REMAINING STREAM BYPASS SYSTEM COMPONENTS NO LONGER IN USE.
21. SOME INTERMITTENT SANDBAG DAMS AND DIVERSIONS MAY BE REQUIRED IN THE AREA WHERE THE DAM WAS REMOVED TO COMPLETE FINAL STREAMBED GRADING DEPENDING ON CONTACTOR'S MEANS AND METHODS FOR THE STREAM DIVERSION.
22. CONTRACTOR SHALL COMPLETE ALL FINAL TRAIL IMPROVEMENTS, PLANTINGS, AND OTHER HABITAT RESTORATION WORK IN A MANNER WORKING METHODICALLY FROM UPSTREAM TO DOWNSTREAM AREAS OF PROJECT EXTENTS, EFFECTIVELY "BACKING OUT" OF THE WORK AREA SO THAT NO EQUIPMENT OR VEHICLE ACCESS OCCURS OVER RESTORED AREAS. ALL AREAS USED FOR VEHICLE ACCESS, STAGING, STOCKPILING, ETC., SHALL BE ADDRESSED FOR POTENTIAL SOIL OVERCOMPACTION AND FULLY RESTORED TO NATURAL CONDITIONS PER PLANS.
23. COMPLETE FINAL STABILIZATION OF PROJECT AREA AND REMOVAL OF TEMPORARY EROSION AND SEDIMENT CONTROL BMPS (EXCEPT THOSE DESIGNED TO BIODEGRADE IN-PLACE).
24. OPEN NEW AND RESTORED TRAIL(S) TO PARK USERS AND REMOVE ALL BARRIERS, SIGNAGE, AND OTHER MEANS TO DETOUR AND EXCLUDE PARK USERS FROM THE PROJECT AREA.
25. REMOVE TEMPORARY BRIDGE OVER THE NEW RESTORED STREAM CHANNEL NEAR STA 3+85.
26. CONTRACTOR SHALL MAINTAIN ALL IMPROVEMENTS - INCLUDING PLANTINGS - FOR THE WARRANTY PERIOD AS SPECIFIED IN CONTRACT DOCUMENTS.

	Description	Date	Initials
Drawn			EM
Designed			IBM, VW
Checked			ME
Revisions			
Revisions			

IAN B. MOSTRE — STATE OF WASHINGTON — 36069 — REGISTERED PROFESSIONAL ENGINEER — DRAFT

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HIDDEN LAKE DAM REMOVAL

60 PCT DESIGN - NOT FOR CONSTRUCTION

STREAMFLOW BYPASS PLAN AND CONSTRUCTION SEQUENCING

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Project No. 18-06771-000

Sheet C-4.0

Sheet 10 Of x

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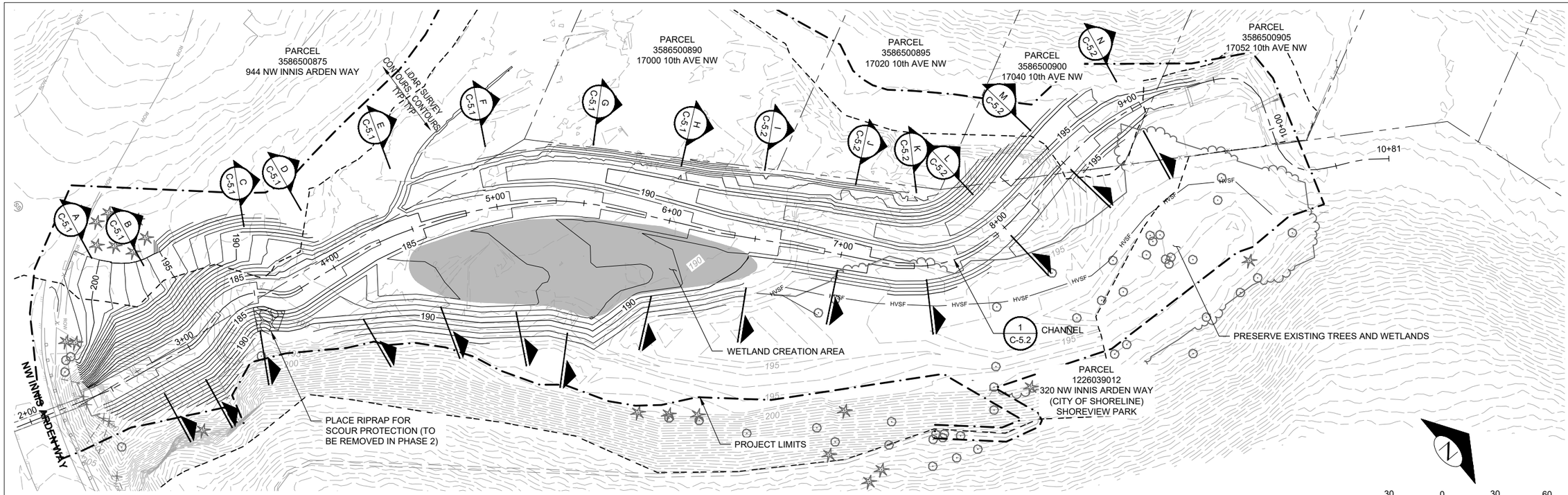

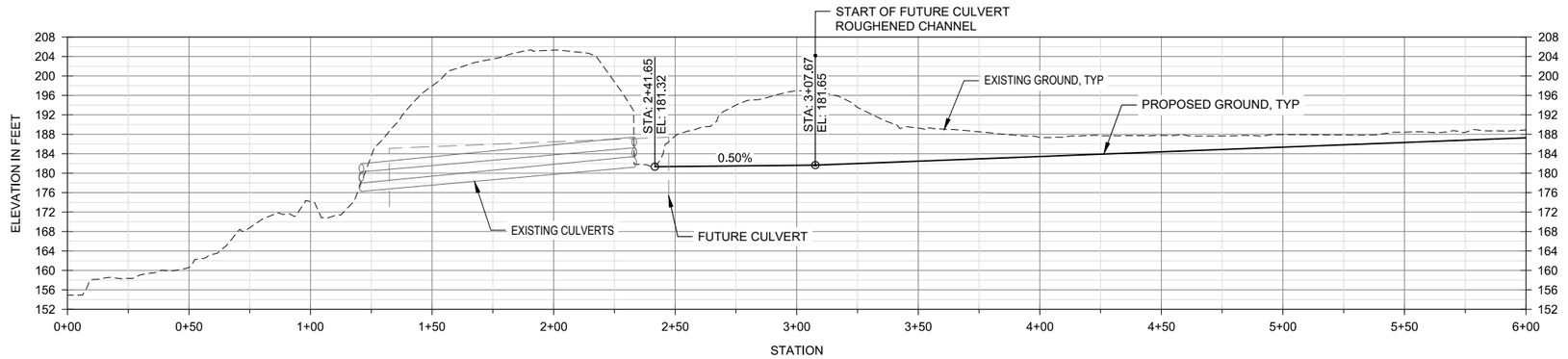

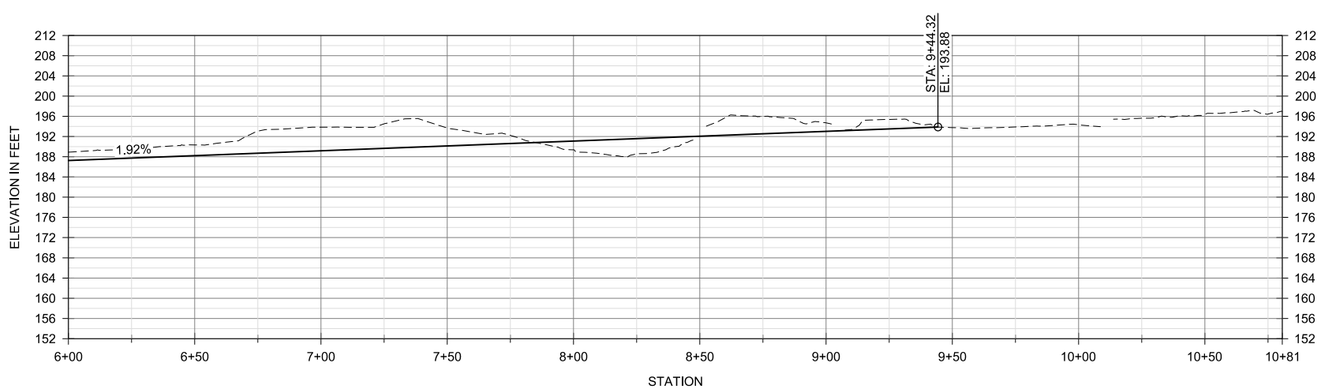

HORIZONTAL SCALE IN FEET
30 0 30 60
15 0 15 30
VERTICAL SCALE IN FEET
VERTICAL EXAGGERATION X 2

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Revisions			

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IAN B. MOSTERT
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36069
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HIDDEN LAKE DAM REMOVAL

60 PCT DESIGN - NOT FOR CONSTRUCTION

CHANNEL GRADING PLAN AND PROFILE

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Project No. 18-06771-000

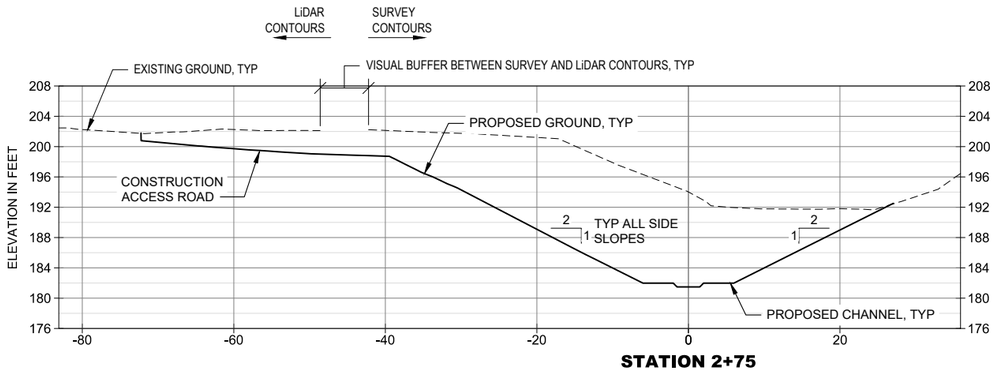
Sheet C-5.0

Sheet 11 Of x

Jul 01, 2019 - 3:47pm emarshall O:\proj\Y2018\18-06771-000\CAD\Dwg\GRADING-STREAM.dwg

NOTES:

1. THALWEG SHOWN FOR CHANNEL GEOMETRY AND SURVEY CONTROL. THALWEG SHALL BE ADJUSTED TO PROVIDE A SERPENTINE LOW FLOW AS DIRECTED BY THE ENGINEER.



STATION 2+75

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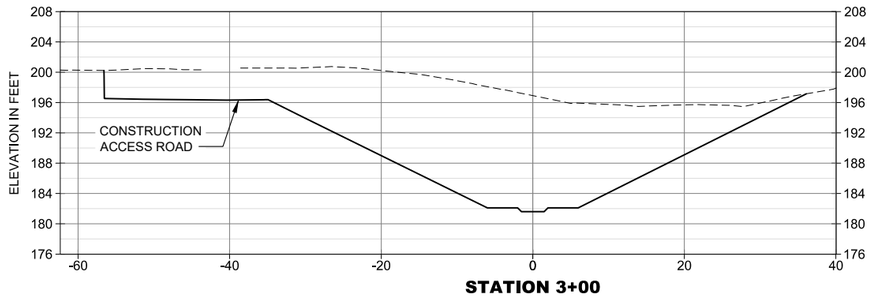
VERT. SCALE: 1"=10'



STATION 3+00

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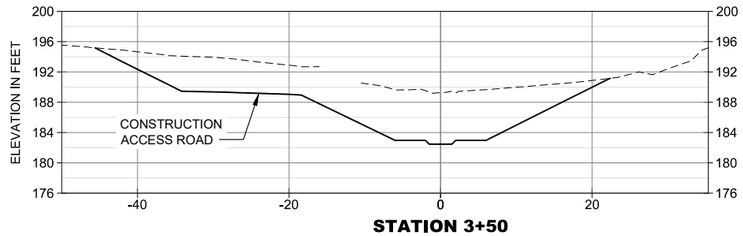

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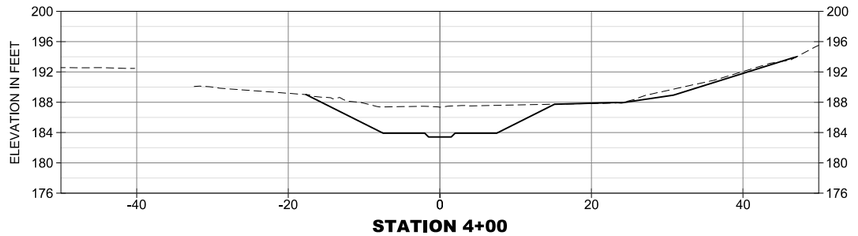

STATION 4+00

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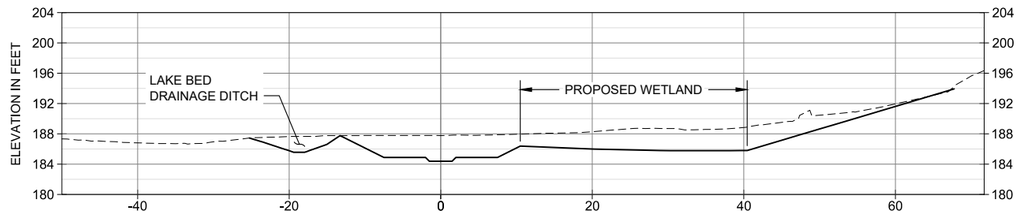

STATION 4+50

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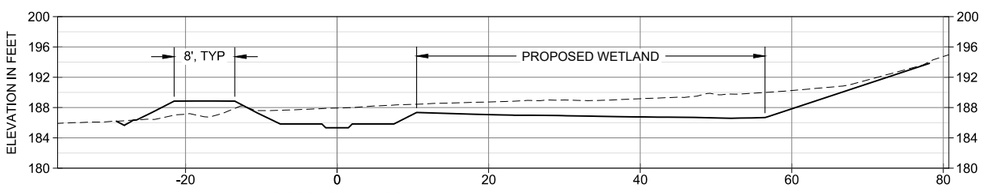

STATION 5+00

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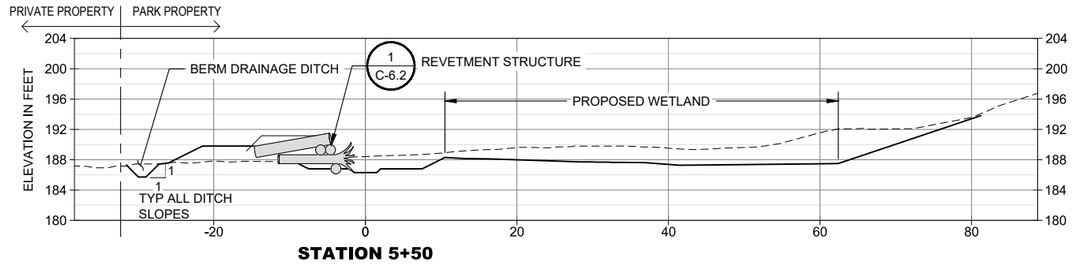

STATION 5+50

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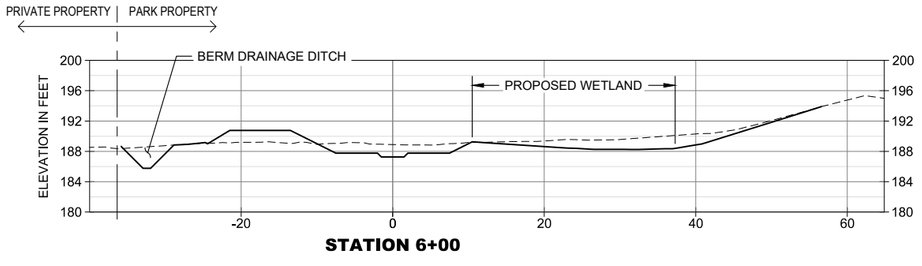

STATION 6+00

CROSS SECTION H — C-5.0
HORIZ. SCALE: 1"=10'
VERT. SCALE: 1"=10'

	Description	Date	Initials
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HIDDEN LAKE DAM REMOVAL
60 PCT DESIGN - NOT FOR CONSTRUCTION

CHANNEL SECTIONS 1

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Project No. 18-06771-000

Sheet C-5.1

Sheet 12 Of x

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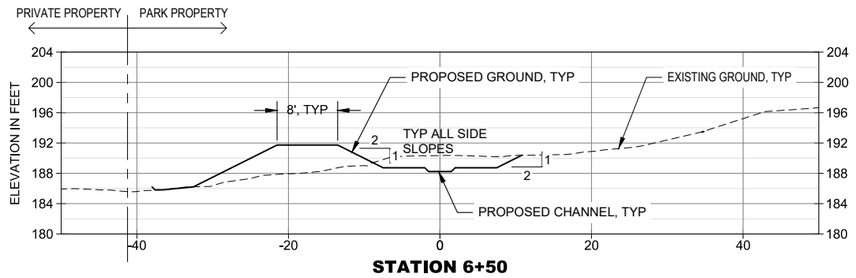

CROSS SECTION — I / C-5.0

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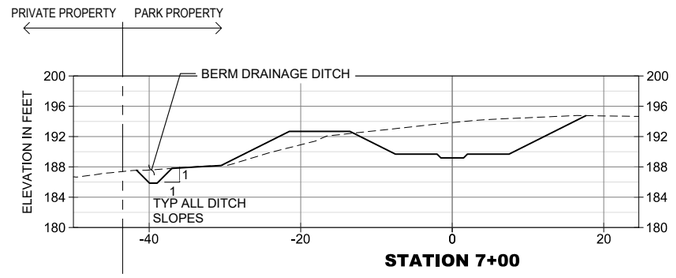

CROSS SECTION — J / C-5.0

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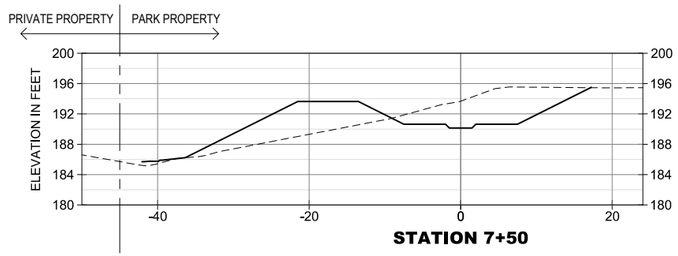

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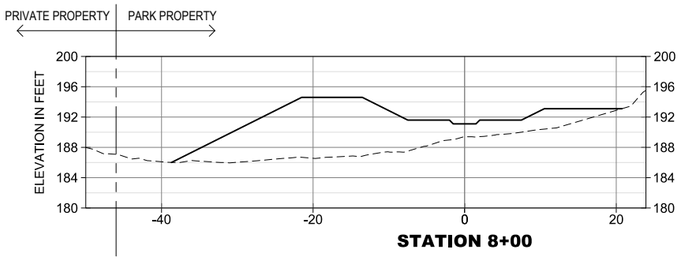

CROSS SECTION — L / C-5.0

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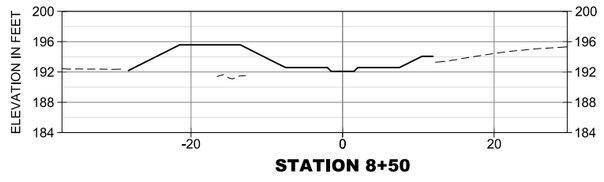

CROSS SECTION — M / C-5.0

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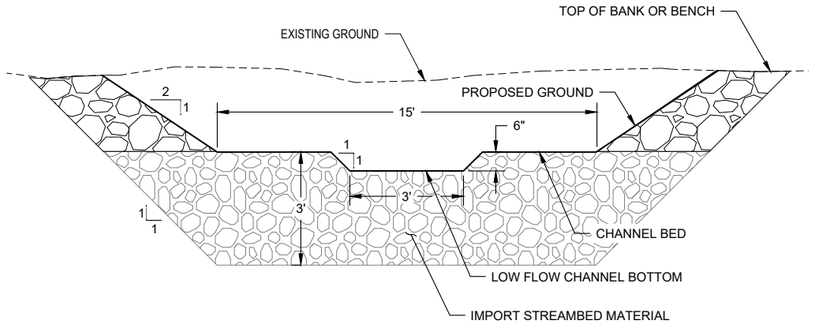
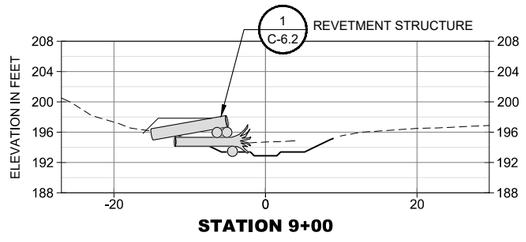


DETAIL - TYPICAL CHANNEL — 1 / C-5.0

SCALE: NTS



CROSS SECTION — N / C-5.0

HORIZ. SCALE: 1"=10'
VERT. SCALE: 1"=10'

NOTES:

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Drawn	EM		
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Revisions			

JAN B. MOSTERT — STATE OF WASHINGTON — 36069 — REGISTERED PROFESSIONAL ENGINEER
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HIDDEN LAKE DAM REMOVAL

60 PCT DESIGN - NOT FOR CONSTRUCTION

CHANNEL SECTIONS 2

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Project No. 18-06771-000

Sheet C-5.2

Sheet 13 Of x

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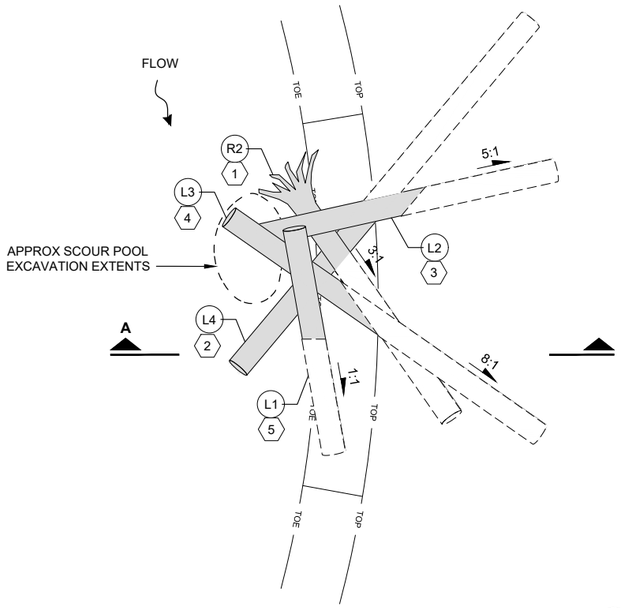
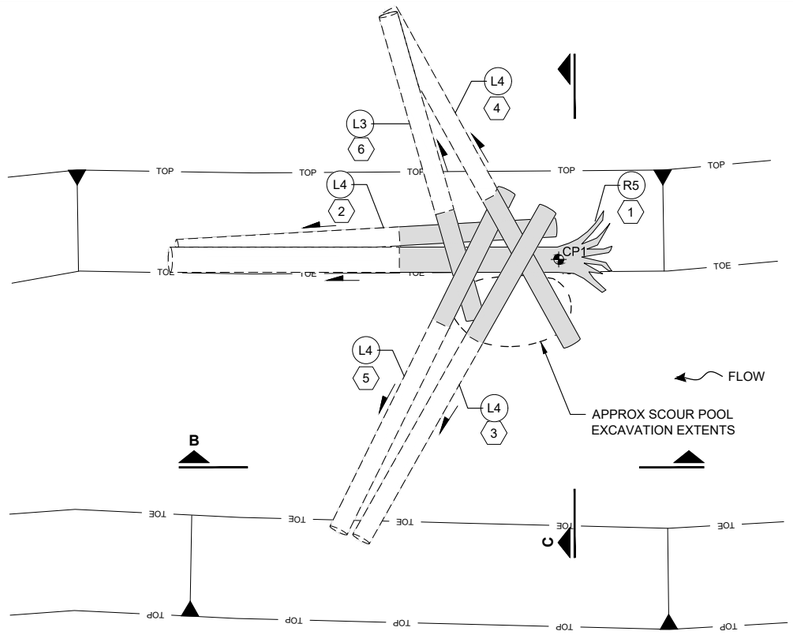


PLAN - HABITAT TYPE 1 STRUCTURE (1 / C-1.0)

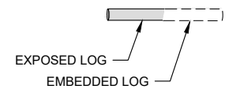
SCALE: NTS



PLAN - HABITAT TYPE 2 STRUCTURE (2 / C-1.0)

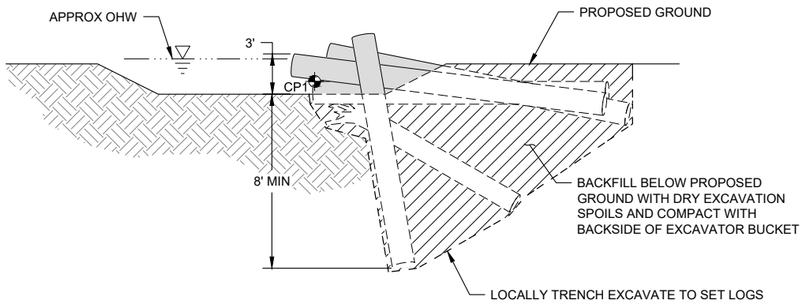
SCALE: NTS

LEGEND:



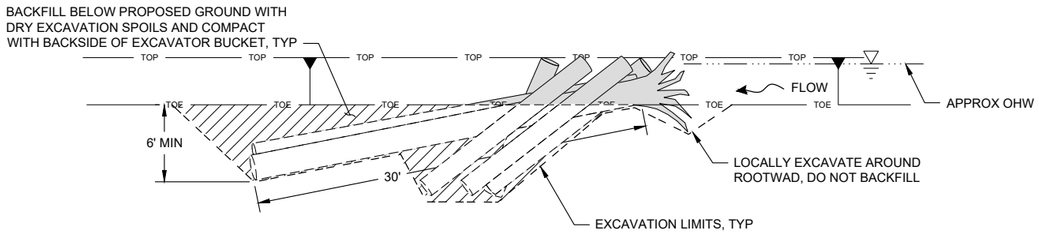
NOTES:

1. EXTENTS OF EMBEDDED LOG PORTIONS SHOWN ARE APPROXIMATE AND WILL VARY FOR EACH STRUCTURE.
2. EXCAVATION LIMITS SHOWN ARE APPROXIMATE AND WILL VARY BASED ON CONSTRUCTION MEANS AND METHODS, SUBSURFACE CONDITIONS, AND LOCATION OF STRUCTURE. CONTRACTOR SHALL ADJUST EXCAVATION LIMITS AS NECESSARY TO COMPLETE CONSTRUCTION.



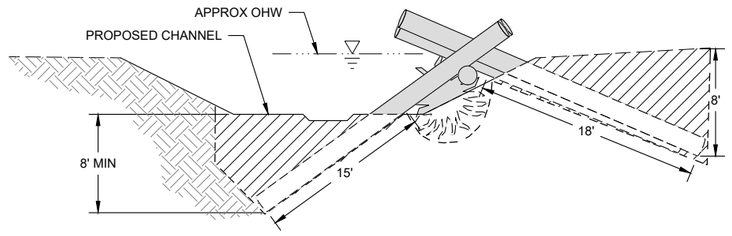
SECTION - HABITAT TYPE 1 STRUCTURE (- / -)

SCALE: NTS



SECTION - HABITAT TYPE 2 STRUCTURE (B / -)

SCALE: NTS



SECTION - HABITAT TYPE 2 STRUCTURE (C / -)

SCALE: NTS

TABLE - HABITAT TYPE 1 STRUCTURE LOG SCHEDULE:

LOG PLACEMENT SEQUENCE	LOG ID #	DIAMETER (IN)	LENGTH (FT)	ROOTWAD
1	R2	18-24	20	YES
2	L4	18-24	30	NO
3	L2	18-24	20	NO
4	L3	18-24	25	NO
5	L1	18-24	15	NO

TABLE - HABITAT TYPE 2 STRUCTURE LOG SCHEDULE:

LOG PLACEMENT SEQUENCE	LOG ID #	DIAMETER (IN)	LENGTH (FT)	ROOTWAD
1	R5	18-24	35	YES
2	L4	18-24	30	NO
3	L4	18-24	30	NO
4	L4	18-24	30	NO
5	L4	18-24	30	NO
6	L3	18-24	25	NO

	Description	Date	Initials
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HIDDEN LAKE DAM REMOVAL

60 PCT DESIGN - NOT FOR CONSTRUCTION

STRUCTURE DETAILS 1

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Project No. 18-06771-000

Sheet C-6.0

Sheet 14 Of x

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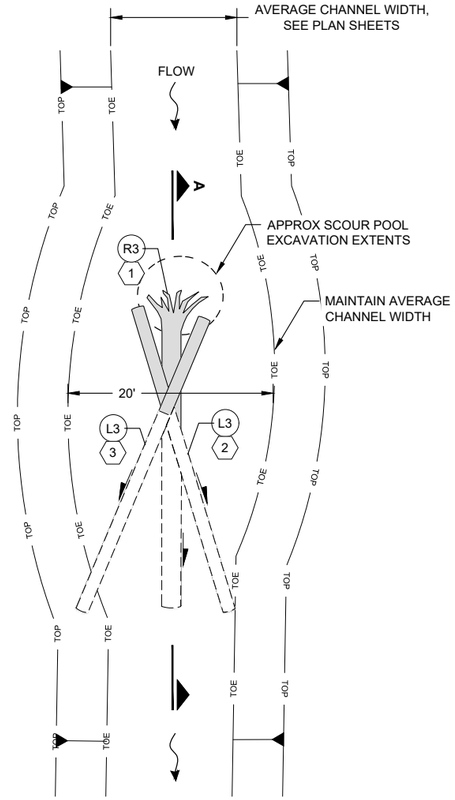
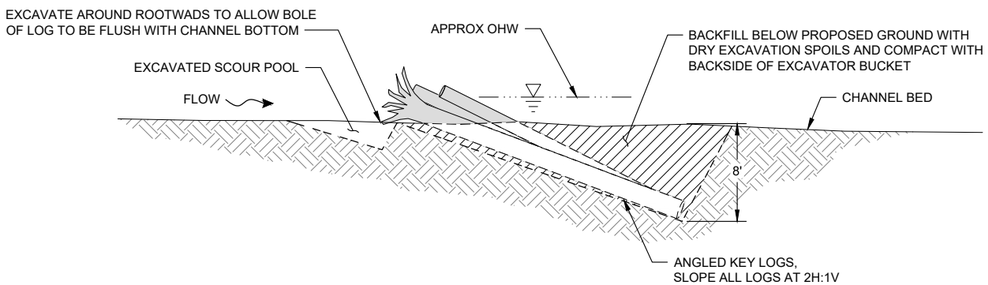


PLAN - HABITAT TYPE 3 STRUCTURE (1 / C-1.0)

SCALE: NTS



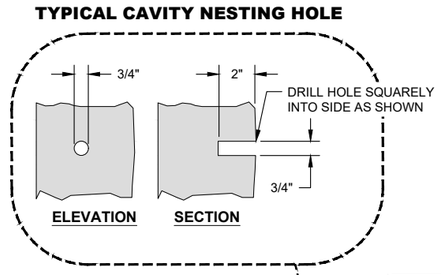
SECTION - HABITAT TYPE 3 STRUCTURE (A / -)

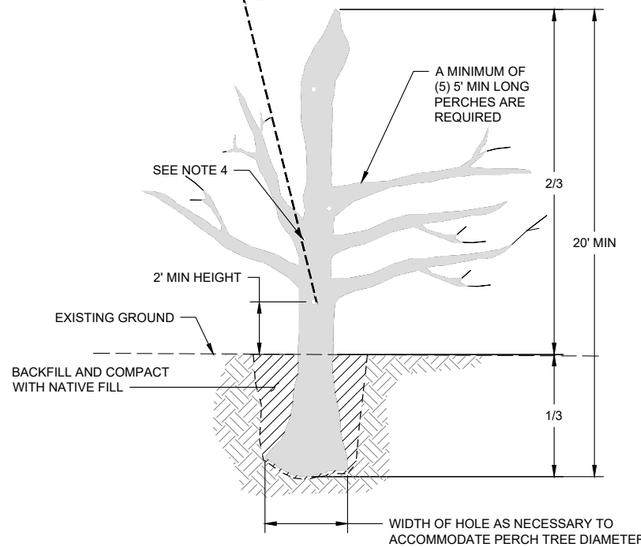
SCALE: NTS

TABLE - HABITAT TYPE 3 STRUCTURE LOG SCHEDULE:

LOG PLACEMENT SEQUENCE	LOG ID #	DIAMETER (IN)	LENGTH (FT)	ROOTWAD
1	R3	18-24	25	YES
2	L3	18-24	25	NO
3	L3	18-24	25	NO

TYPICAL CAVITY NESTING HOLE





RAPTOR PERCH NOTES:

1. INSTALL PERCH TREE IN LOCATION SHOWN ON PLANS. BURY AS SHOWN TO SECURE TREE IN AN UPRIGHT POSITION.
2. DO NOT TREAT TREE WITH ANY PRESERVATIVES, STAINS, OR CHEMICAL TREATMENTS.
3. PERCH TREES SHALL BE PLACED NEAR STREAM CORRIDORS AND HABITAT TRANSITIONS.
4. INSTALL CAVITY NESTING HOLES. DRILL 16 HOLES TOTAL. STAGGER HOLES AT DIFFERENT ELEVATIONS AROUND THE ENTIRE PERIMETER OF THE TREE RANGING IN HEIGHT FROM 2' TO 8' ABOVE GRADE. EVENLY DISPERSE THE HOLES ALONG THE HEIGHT OF THE TREE.

DETAIL - RAPTOR PERCH (2 / C-1.0)

SCALE: NTS

LEGEND:

NOTES:

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2. EXCAVATION LIMITS SHOWN ARE APPROXIMATE AND WILL VARY BASED ON CONSTRUCTION MEANS AND METHODS, SUBSURFACE CONDITIONS, AND LOCATION OF STRUCTURE. CONTRACTOR SHALL ADJUST EXCAVATION LIMITS AS NECESSARY TO COMPLETE CONSTRUCTION.

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Designed			IBM, VW
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Revisions			
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HIDDEN LAKE DAM REMOVAL

60 PCT DESIGN - NOT FOR CONSTRUCTION

STRUCTURE DETAILS 2

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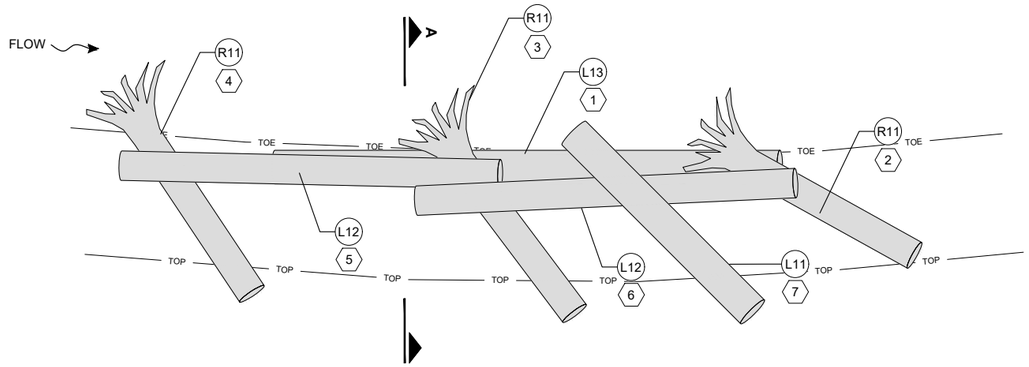
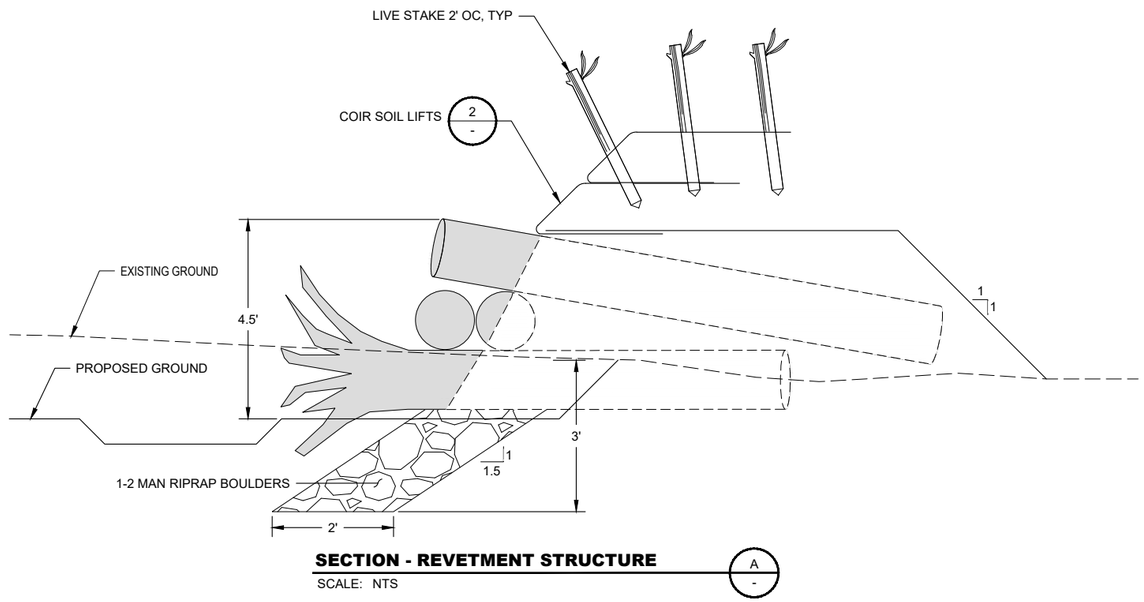


PLAN - REVETMENT STRUCTURE (1 / C-1.0)

SCALE: NTS



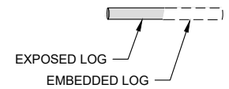
SECTION - REVETMENT STRUCTURE (A / -)

SCALE: NTS

TABLE - HABITAT TYPE 1 STRUCTURE LOG SCHEDULE:

LOG PLACEMENT SEQUENCE	LOG ID #	DIAMETER (IN)	LENGTH (FT)	ROOTWAD
1	L13	14-16	20	NO
2-4	R11	12-14	10	YES
5	L12	12-14	15	NO
6	L12	12-14	15	NO
7	L11	14-16	10	NO

LEGEND:



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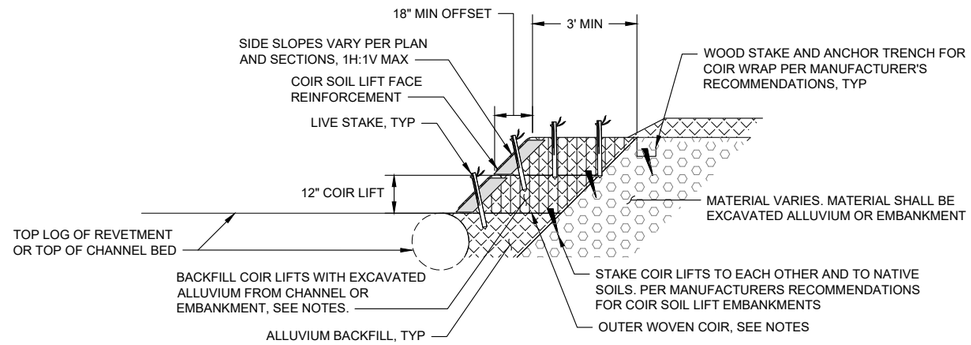
1. EXTENTS OF EMBEDDED LOG PORTIONS SHOWN ARE APPROXIMATE AND WILL VARY FOR EACH STRUCTURE.
2. EXCAVATION LIMITS SHOWN ARE APPROXIMATE AND WILL VARY BASED ON CONSTRUCTION MEANS AND METHODS, SUBSURFACE CONDITIONS, AND LOCATION OF STRUCTURE. CONTRACTOR SHALL ADJUST EXCAVATION LIMITS AS NECESSARY TO COMPLETE CONSTRUCTION.



DETAIL - TYPICAL COIR SOIL LIFT EMBANKMENT (2 / -)

SCALE: NTS

COIR WRAP PREPARATION

(SEE SPECIFICATIONS)

STEP 1
- OVEREXCAVATE TO PLACE COIR WRAP SOIL LIFTS
- PROTECT SUBGRADE FROM FOOT TRAFFIC AND CONSTRUCTION ACTIVITIES THAT COULD CAUSE SOIL DISTURBANCE OR BANK SETTLEMENT PRIOR TO COIR PLACEMENT

STEP 2
- PLACE OUTER WOVEN COIR FOR THE BOTTOM OF THE LIFT
- PLACE INNER NON-WOVEN COIR
- STAKE COIR FABRIC TO NATIVE SOIL BELOW LIFT

STEP 3
- INSTALL FORM (IF CONTRACTOR CHOOSES) TO HOLD COIR WRAP AND SOIL TO DESIGN DIMENSIONS
- PLACE 12" HIGH LAYER OF SOIL COMPOSED OF TOPSOIL TYPE D AMENDED WITH ALLUVIUM AND COMPACT PER SPECIFICATIONS

STEP 4
- PLACE SEED MIX PER PLANTING PLAN AND SPECIFICATIONS

STEP 5
- WRAP OUTER WOVEN COIR AND INNER NON-WOVEN COIR AROUND SOIL LIFT TO ENCASE THE LIFT

STEP 6
- STAKE PER COIR MANUFACTURER'S RECOMMENDATION

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HIDDEN LAKE DAM REMOVAL

60 PCT DESIGN - NOT FOR CONSTRUCTION

STRUCTURE DETAILS 3

811 Know what's below. Call before you dig.

ONE INCH AT FULL SIZE

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Sheet C-6.2

Sheet 16 Of x

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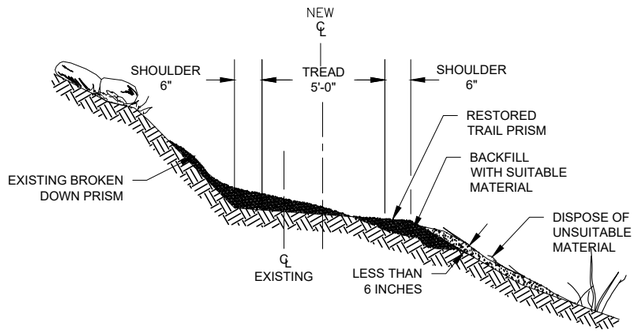
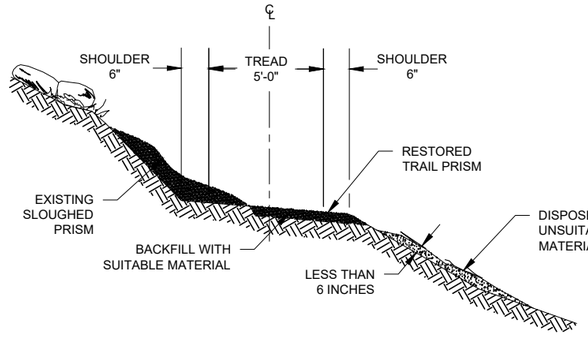


TRAIL RESTORATION: BROKEN DOWN SECTION

SCALE: NTS

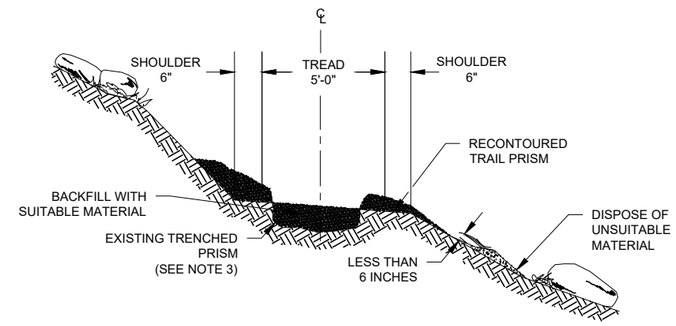
1 / C-1.1



TRAIL RESTORATION: SLOUGHED SECTION

SCALE: NTS

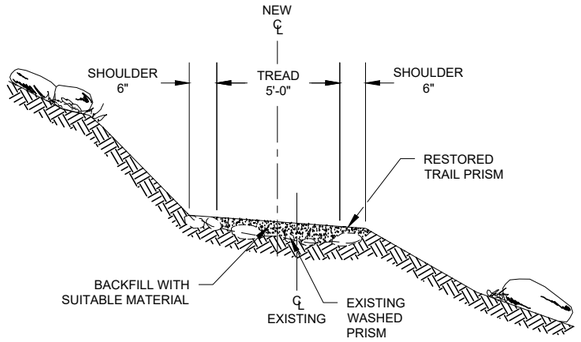
2 / C-1.1



TRAIL RESTORATION: TRENCHED SECTION

SCALE: NTS

3 / C-1.1



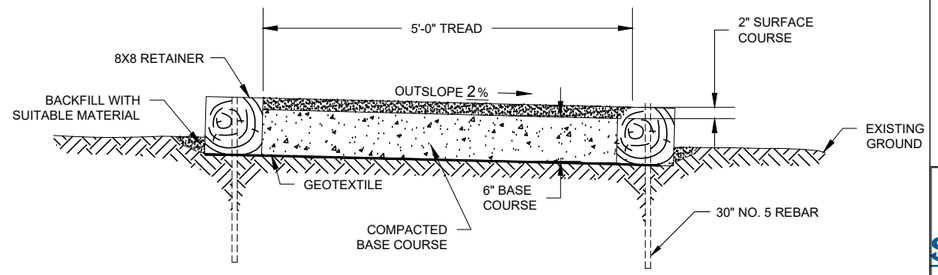
TRAIL RESTORATION: WASHED SECTION

SCALE: NTS

4 / C-1.1

NOTES:

1. RE-ESTABLISH ORIGINAL DRAINAGE STRUCTURE TO MATCH THREAD SURFACE
2. INSTALL CHECK DAMS, DRAINAGE DIPS OR OTHER DRAINAGE STRUCTURES WHEN SPECIFIED.
3. USE ONLY SUITABLE MATERIAL TO CONSTRUCT RESTORED TRAIL PRISMS. DISPOSE OF UNSUITABLE MATERIAL AS SHOWN ON PLANS.



TURNPIKE TRAIL:
HARDENED SURFACE W/ RETAINERS

SCALE: NTS

5 / C-1.1

NOTES:

1. REMOVE AND DISPOSE OF DUFF AND TOP ORGANIC LAYERS DOWN TO MINERAL SOIL.
2. COMPACT BACKFILL IN 6 INCH LIFTS UNTIL NO VISUAL DISPLACEMENT.

GENERAL NOTES:

1. STANDARD TRAIL AND TYPICAL HARDENED SURFACE W/ RETAINERS DETAIL MODIFIED FROM US. DEPARTMENT OF AGRICULTURE FOREST SERVICE

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HIDDEN LAKE DAM REMOVAL

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TRAIL DETAILS 1

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Sheet 17 Of x

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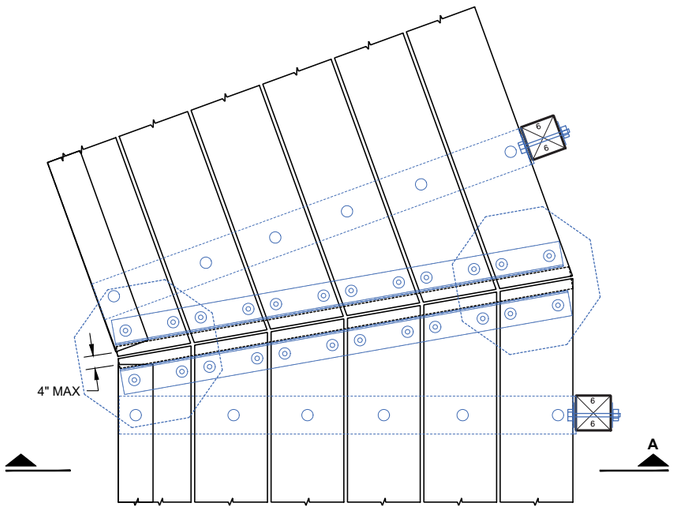
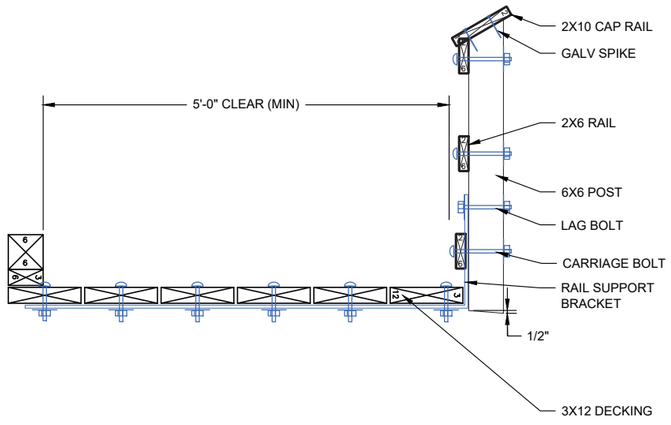


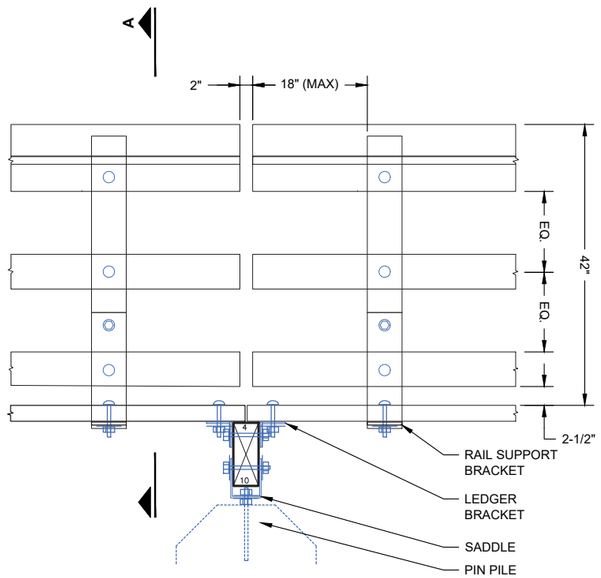
PLAN AT DECKING JOINT — 2

SCALE: NTS



SECTION AT RAILING AND CURB — A

SCALE: NTS

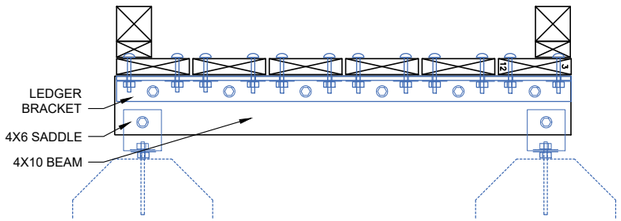


ELEVATION AT RAILING — 3

SCALE: NTS

ELEVATION, LEDGER BRACKET AT BEAM — 4

SCALE: NTS



SECTION AT BEAM, CURB BOTH SIDES — 5

SCALE: NTS

SECTION AT MID-SPAN, CURB BOTH SIDES — 6

SCALE: NTS

DETAIL - BOARDWALK — 1 / C-1.1

SCALE: NTS

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HIDDEN LAKE DAM REMOVAL

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TRAIL DETAILS 2

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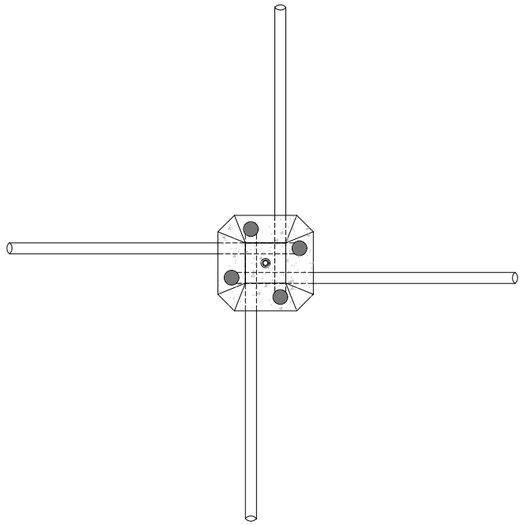
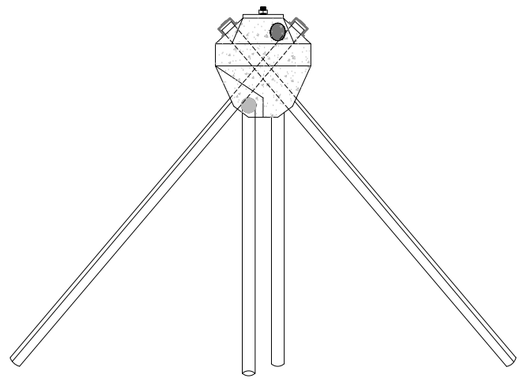


PLAN VIEW W/ PINS



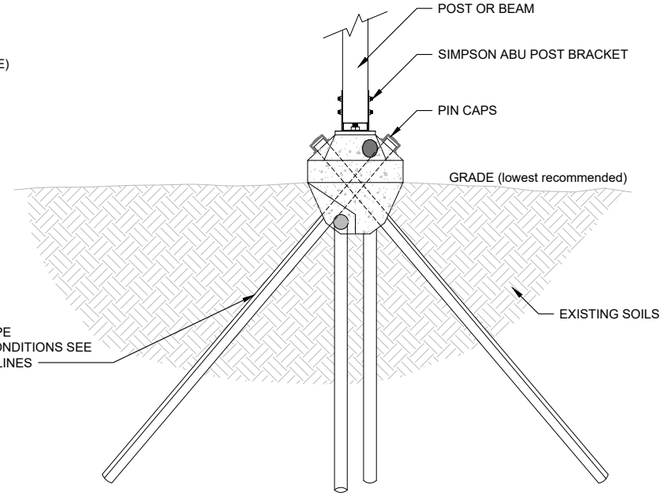
ELEVATION W/ PINS

WEIGHT 96 LBS. (CONCRETE ALONE)

13 INCHES SQUARE AT MIDPOINT

14 INCHES HIGH

BRACKET SEAT - 5.5" SQUARE



DIAMOND PIER FOOTING DP-100E

SCALE: NTS

1
C-1.1

GENERAL NOTES:

1. DIAMOND PIER DETAIL BY PIN FOUNDATIONS, INC. (COPYRIGHT DIAMOND PIER)

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HIDDEN LAKE DAM REMOVAL

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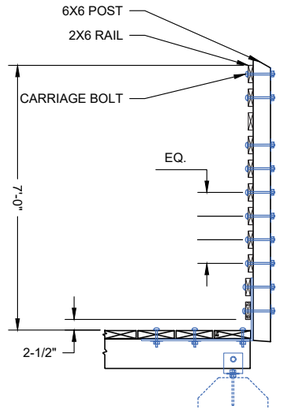
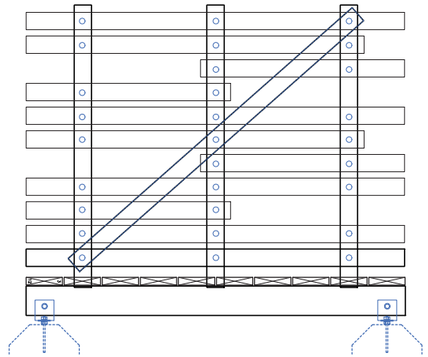


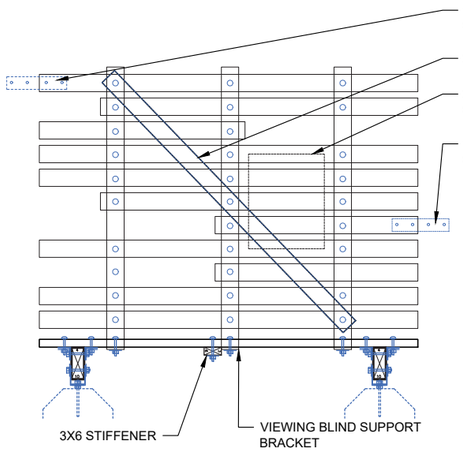
SECTION 1 -

SCALE: NTS



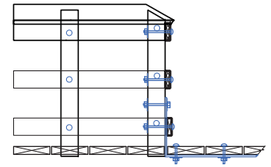
ELEVATION VIEWING WEST 2 -

SCALE: NTS



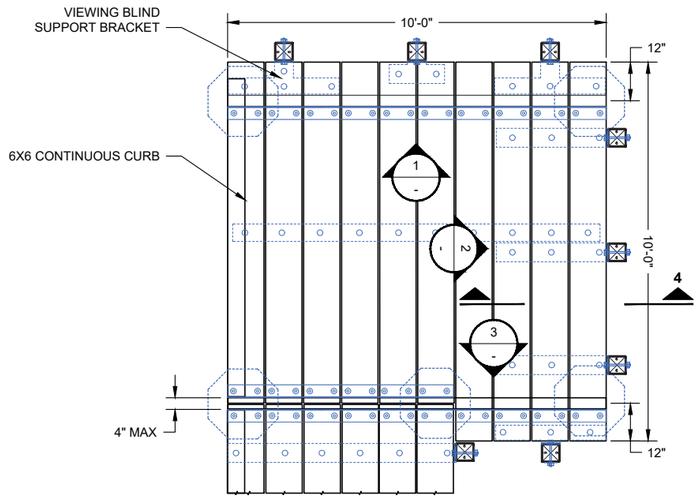
ELEVATION VIEWING NORTH 3 -

SCALE: NTS



VIEWING BLIND/ RAILING CONNECTION 4 -

SCALE: NTS



PLAN - VIEWING BLIND 5 -

SCALE: NTS

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HIDDEN LAKE DAM REMOVAL

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TRAIL DETAILS 4

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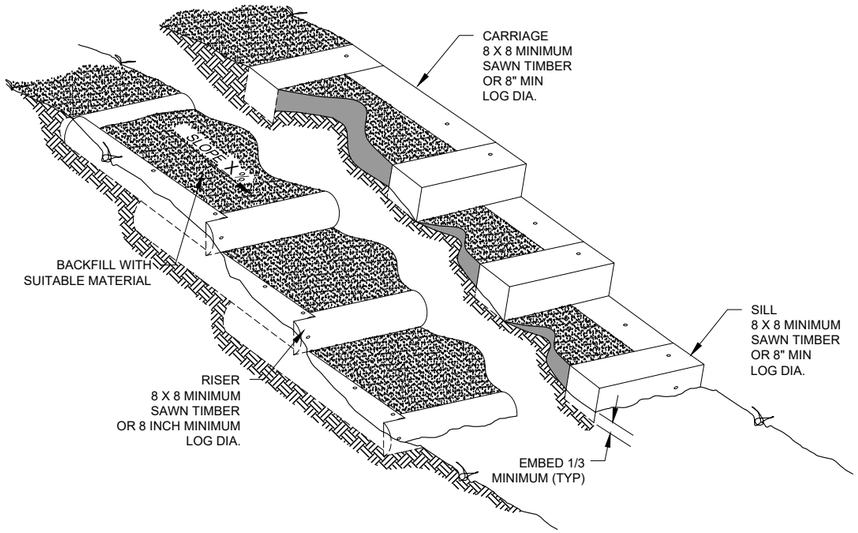
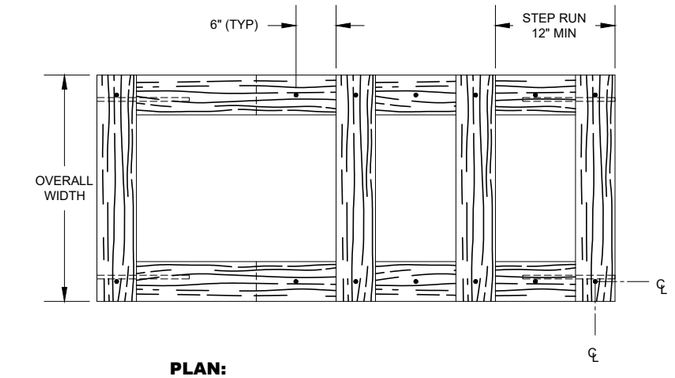


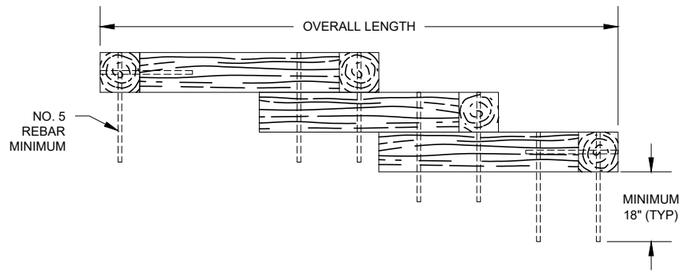
OVERLAPPING TIMBER STEP (1 / -)

SCALE: NTS



PLAN: OVERLAPPING TIMBER STEP (2 / -)

SCALE: NTS



ELEVATION: OVERLAPPING TIMBER STEP (3 / -)

SCALE: NTS

NOTES:

1. PRE-DRILL HOLES FOR REBAR AND PINS TO PREVENT SPLITTING OF LOGS OR SAWN TIMBERS.
2. RECESS END OF REBAR 1/2 INCH BELOW TOP OF TIMBER.
3. COMPACT BACKFILL IN 6 INCH LIFTS UNTIL NO VISUAL DISPLACEMENT.
4. ALL FIELD DRILLED HOLES AND CUTS SHALL BE FIELD TREATED.
5. REMOVE AND DISPOSE OF DUFF AND TOP ORGANIC LAYERS DOWN TO MINERAL SOIL.
6. MINIMUM OVERLAP OF BOTTOM CARRIAGE IS THE SAME AS THE STEP RUN LENGTH.
7. RISERS AND CARRIAGES SHALL BE THE SAME DIMENSIONS.

GENERAL NOTES:

1. OVERLAPPING TIMBER STEP DETAIL FROM US. DEPARTMENT OF AGRICULTURE FOREST SERVICE

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HIDDEN LAKE DAM REMOVAL

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TRAIL DETAILS 5

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DETAIL - INTERPRETIVE SIGN 1 / C-1.1

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GENERAL NOTES:

1.

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HIDDEN LAKE DAM REMOVAL

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